Report of the Provincial Wait Time Monitoring Project Steering Committee

January 2004

104-03047/

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LETTER OF TRANSMITTAL

January 15, 2004

Dr. Thomas Ward
Deputy Minister of Health
Province of Nova Scotia

Dear Dr. Ward:

On behalf of our colleagues, we are pleased to present the report of the Provincial Wait Time Monitoring Project Steering Committee. This report represents an important first step for the Province of Nova Scotia to establish provincial standards for the collection and reporting of wait time information. This is a critical issue for the public, for practitioners, and for the Nova Scotia health care system.

We would like to take this opportunity to thank the members of the Steering Committee and the Working Groups for their support and dedication in the preparation of this report. And we would also like to express our appreciation to the many clinicians, administrators, and staff, who took the time to provide assistance and input to the Steering Committee and its Working Groups.

Respectfully submitted,

Mary E. McKeen

Mary McKeen,
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Executive Summary

Background

In its plan, *Your Health Matters: Working Together Toward Better Care* (2003), the Province of Nova Scotia identified shortening wait times for tests, treatment, and care as one of its key priorities. The first step in its plan is to develop ways to standardize wait-time information across the province.

Currently, some wait-time information is being collected across the province; however, it is collected and reported in different ways. Without standard information, it is very difficult to formulate and co-ordinate a process to shorten wait times.

Valid and reliable information on the performance of the health care system is critical for the effective management of the system. It provides the evidence required to make good decisions about the best allocation of resources. Without good information decisions may become hostage to unsubstantiated claims and anecdotal information. Action that is unsupported by reliable information is a poor substitute for careful evaluation and analysis.

The Provincial Wait Time Project Steering Committee

The Provincial Wait Time Monitoring Project Steering Committee was formed to research and recommend a standardized, province-wide approach to collecting and reporting wait-time information.

The committee was asked to submit its recommendations to the Deputy Minister in the fall 2003. The committee will be providing a second report, to follow in the spring 2004, that will outline recommended time frames and the resources required to implement the recommendations described in this report.

The steering committee was made up of representatives from the clinical and administrative communities from various district health authorities in the province and the Nova Scotia Department of Health. The co-chairs of the committee are Dr. Mike MacKenzie, Chief of Staff, Guysborough Antigonish Strait Health Authority, and Mary McKeen, Chief Information Officer, Nova Scotia Department of Health. Dr. Peter Glynn, Chair of the Saskatchewan Surgical Care Network (a project that monitors and manages wait times for all surgical services in Saskatchewan), is involved in an advisory capacity, sharing the experiences he gained working with the network.

Priority Wait-Time Areas

The steering committee focused on three wait-time areas, which, when combined, are reflective of a large portion of the continuum of health care services. Given the magnitude of this effort, the committee identified specific services as starting points within each:

- **Surgical Services**—orthopedics
- **Diagnostic Services**—computed tomography (CT) scans, magnetic resonance imaging (MRI) scans, and genetic services
- **Referrals from General Practitioner to Specialist**—gastroenterology, plastic surgery, and medical oncology

The focus of this project is on non-emergency tests, procedures and consultations.

Working Groups

The committee established smaller working groups to address each of the three main areas and the service areas chosen within each. Co-chaired by steering committee members, these groups consisted of five to seven members with clinical and administrative backgrounds who work within each of the priority areas, as well as members from the Nova Scotia Department of Health.

Each working group was asked to make recommendations on the following:

- Wait-time definition—specific start and end times for measuring wait times.
- Priority bands—categories that reflect the urgency level of patients (this excludes emergency cases as noted above).
- Priority tool—consistent way to assign cases to priority bands.
- Target wait times*—suitable time frames for service delivery.
- Wait-time data collection—the systems (paper or electronic) that should be used in capturing and reporting the information.
- Data Reporting—how wait-time information should be reported to the public (by district health authority, by physician, etc.).

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* Target wait times are meant to be goals or objectives toward which the system can strive to better serve patients. They are not guarantees for service within particular lengths of time.

Each working group based its recommendations on clinical opinion and work done in other provinces and countries on wait-time data collection and reporting. Each group's recommendations were circulated to the relevant clinical communities for review and feedback.

For example, the Diagnostics Working Group circulated their work to all radiologists in Nova Scotia, to all members of the medical advisory committees of each district health authority and the IWK Health Centre, and to all diagnostic imaging managers in the province.

The respective clinical communities responded to the consultation processes in very short periods of time with response rates between 42 and 73 per cent. Each working group reviewed the results of the consultations and made changes to its recommendations, where appropriate, then presented the recommendations to the steering committee.

Recommendation Highlights

Wait-Time Definitions

Overall, the working groups were consistent in the parameters chosen for wait-time definitions. With the exception of surgical services, all other areas have recommended that wait times begin with the receipt of the referral by the specialist or department, and end when the procedure is performed. For instance, when a CT scan is requested, the wait time begins when the requisition is received by the diagnostic imaging department, not when the physician advises his or her patient that a CT scan will be requested.

As mentioned earlier, surgery is the exception to this. Wait times for surgery will start when the patient and surgeon agree that surgery is warranted, and will end when the procedure is performed.

Priority Bands and Priority Tools

In general terms, priority bands are most often set as three categories for prioritizing wait times. The priority tools, which range from tools already in use in genetics and gastroenterology to checklists and priority scales, enable health professionals to appropriately schedule patients for services or place patients on wait lists according to need. As one example, referrals to plastic surgeons can be placed in one of five categories, from the highest, Priority 1, to be seen in three days, to the lowest, Priority 5, which means the patient is at low physical or systemic risk and can be seen within four to six months.

Target Wait Times

The purpose of target wait times must be understood correctly. They are not guarantees for service within particular lengths of time; rather, they are goals toward which the system can strive to better provide service to patients.

As shown below, the recommended target wait times vary among the different service areas:

Surgical Services*

- Priority A: 24 hours or less
- Priority B: 24 hours to 3 weeks
- Priority C: 3 to 6 weeks
- Priority D: 6 weeks to 3 months
- Priority E: 3 to 6 months
- Priority F: more than 6 months

Orthopedic Services*

- Priority A: 24 hours or less
- Priority B/C: 24 hours to 6 weeks
- Priority D/E: 6 weeks to 6 months

Diagnostic Services—CT and MRI

- P1: 3 calendar days or less
- P2: 4 to 14 calendar days
- P3: 15 to 28 calendar days

Diagnostic Services—Genetic Services

- urgent: within 2 weeks
- semi-urgent: 2 weeks to 3 months
- non-urgent: 3 to 6 months

Referrals from General Practitioner to Specialist—Gastroenterology

- P1: within 7 days
- P2: 8 days to 7 weeks
- P3: 7 weeks to 7 months

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* Even though the focus of this project is on the monitoring of non-emergency procedures, it was decided to also monitor the wait times for emergency surgical cases (within 24 hours) for the purposes of a complete data capture.

Referrals from General Practitioner to Specialist—Medical Oncology

It is recommended that Cancer Care Nova Scotia lead a process to establish a provincial standard in this area.

Referrals from General Practitioner to Specialist—Plastic Surgery

- P1: within 3 days
- P2: 4 days to 3 weeks
- P3: 3 to 6 weeks
- P4: 6 weeks to 4 months
- P5: 4 to 6 months

Wait-time Information Collection

The majority of the recommendations proposed short- and long-term plans that would modify existing software for province-wide use, with appropriate revisions to data fields, as required.

For instance, for orthopedic services it is recommended that, in the short term, the Microsoft Access-based database currently used in Capital Health's Orthopedic Wait List Management Project be expanded to include all orthopedic surgery locations in the province. Also recommended is that the scheduling system currently being implemented as part of the Nova Scotia Hospital Information System (NShIS) be tested to assess its feasibility as a long-term solution to capture surgical data.* As well, in the long term, operating room management software should be implemented province-wide to support the efficient use of operating rooms in the province.

Due to the lack of appropriate electronic systems, it is recommended that, in the short term, the wait times for referral to gastroenterology and plastic surgery specialists be collected using a chart-review sampling methodology. In the long term, it is recommended that current electronic patient scheduling systems and the electronic scheduling system being implemented as part of NShIS be examined for their feasibility for use in data collection. The medical oncology recommendation is to have Cancer Care Nova Scotia, Nova Scotia Cancer Centre, and Cape Breton Cancer Centre investigate the feasibility of modifying the Oncology Patient Information System (OPIS) database to enable it to collect the desired information after provincial standards for priority bands and priority tools have been established.

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* The Nova Scotia Hospital Information System (NShIS) is a project currently underway to implement hospital information systems in 34 hospitals in Nova Scotia's district health authorities, with the exception of Capital Health. It is expected to be fully implemented by 2005–2006. A plan is under development to ensure that NShIS will be interoperable with the systems already in place in Capital Health and the IWK Health Centre.

Data Reporting

Again, there are similarities in how all wait-time monitoring areas are recommending that wait-time information be reported. The majority are recommending that the Department of Health report the information to the public by district health authority, with referring physicians having access to wait times of individual specialists.

As diagnostic imaging does not have an individual wait list by specialist, the more applicable approach, in addition to reporting by the district health authority, is to report by body part/scan type.

Similarly, as medical oncology services are centralized in both Sydney and Halifax, the recommendations are to report by facility and by location of the cancer.

Common to all wait-time monitoring areas was the recommendation to report pediatric wait-time data separately from the adult population, and not include it in the calculation of any provincial statistics.

Areas for Future Wait-Time Monitoring

The recommended next wait-time monitoring areas to be developed are as follows:

- surgical services—general surgery and urology
- diagnostic services—ultrasound, colonoscopy, nuclear medicine, and mammography screening
- referrals from general practitioner to specialist—cardiology, geriatrics, neurology, and dermatology

Next Steps

Implementation Strategy

This report represents the completion of the first stage of the project. The next report due from the steering committee (spring 2004) is the Implementation Strategy. This will identify what is needed to implement the recommendations of the steering committee, including resource requirements, changes to electronic systems, participants, time lines, ongoing operational support, reporting requirements, and a communication strategy.

Advisory Committee

To ensure that wait-time monitoring work continues and is given the profile that it deserves, the steering committee proposes that a Wait Time Monitoring Advisory Committee be established to provide advice to the minister on ongoing wait-time monitoring issues. The advisory committee would also communicate with health care providers and the public on wait-time issues including the reporting of wait-time data, and advise on the implementation and evaluation of the recommendations of this report that are adopted by the Department of Health.

Summary of Recommendations

Surgical Services: Orthopedics

Recommendation: It is recommended that the wait time for surgery be measured as the number of calendar days from the date the original decision of surgical intervention between patient and surgeon is made to the date the procedure is performed

Recommendation: It is recommended that surgical wait times be recorded and reported using six priority bands: Priority A (highest) to F (lowest).

Recommendation: It is recommended that, specific to their needs, orthopedic services combine five of the six priority bands recommended for all surgical services into the following three priority bands:

- Priority A
- Priority B/C
- Priority D/E

Recommendation: It is recommended that each case be assigned to a priority band using an unmarked 10-cm visual analogue scale (VAS) as currently used in Capital Health's Orthopedic Wait List Management Project.

Recommendation: It is recommended that the target wait times for surgery be as follows:

- Priority A: within 24 hours
- Priority B: 24 hours to 3 weeks
- Priority C: 3 to 6 weeks
- Priority D: 6 weeks to 3 months
- Priority E: 3 to 6 months
- Priority F: more than 6 months

Recommendation: It is recommended that the orthopedic services adopt the target wait times recommended for all surgical services, but combine the time frames to match the combined priority bands:

- Priority A: within 24 hours
- Priority B/C: 24 hours to 6 weeks
- Priority D/E: 6 weeks to 6 months

Recommendation: It is recommended that, in the short term, until a more permanent electronic system can be implemented, the Microsoft Access-based orthopedics wait-list data collection project in Capital Health be expanded to include all orthopedic surgery locations in the province.

Recommendation: It is recommended that the scheduling system currently being implemented as part of the Nova Scotia Hospital Information System (NShIS) be tested to assess its feasibility as a long-term solution to capture surgical data. This option should be initiated as soon as possible, starting with the sites that have already implemented the scheduling system (i.e., Guysborough Antigonish Strait and Cape Breton District health authorities).

Recommendation: It is recommended that, in the long term, operating room management software be implemented province-wide to support the efficient use of operating rooms in the province.

Recommendation: It is recommended that the Department of Health report the orthopedic wait times to the public by district health authority and by major procedure based on volume and that referring physicians have access to the wait times of individual surgeons.

Recommendation: It is recommended that the referral patterns for orthopedics among district health authorities be reported to the public to show the percent and origin of patients referred to services outside of their district of residence.

Recommendation: It is recommended that pediatric surgery wait-time data be reported separate from the data on the adult population and not be included in the calculation of any provincial statistics.

Surgical Services: Future Areas

Recommendation: It is recommended that the next surgical services to be developed for wait-time monitoring be the following:

- general surgery
- urology

Diagnostic Services: CT/MRI

Recommendation: It is recommended that the wait time be measured as the number of calendar days from the date the requisition is received by the diagnostic imaging department to the date the scan is performed.

Recommendation: It is recommended that the wait times be recorded and reported in three priority bands: P1 (most urgent), P2, and P3 (least urgent).

Recommendation: It is recommended that each case be assigned to a priority band based on a score calculated from severity in three categories as shown in Figure 3.2 and that the total score from the three categories be translated into a priority band according to the following scheme:

- 3–5 = P3
- 6–8 = P2
- 9–12 = P1

Recommendation: It is recommended that the target wait times for CT and MRI be as follows:

- P1: 3 calendar days or less
- P2: 4 to 14 calendar days
- P3: 15 to 28 calendar days

Recommendation: It is recommended that, in the short term, until electronic systems are in place across the province as per the NShIS, wait times in all scanner locations be reported using the existing booking systems to count the number of calendar days until the next day with three available appointments.

Recommendation: It is recommended that, in the long term, all districts, except Capital Health, collect the wait-time data using the Imaging and Therapeutic Services module, to be implemented as part of the ongoing NShIS project.

Recommendation: It is recommended that the information systems currently in use in Capital Health and at the IWK Health Centre be modified to collect the wait-time data.

Recommendation: It is recommended that the Department of Health report the CT/MRI wait-time data to the public by district health authority, and by body part/scan type.

Recommendation: It is recommended that the pediatric CT/MRI wait-time data from the IWK Health Centre be reported separate from the adult data from the district health authorities and not be included in the calculation of any provincial statistics.

Recommendation: It is recommended that scans booked in advance as part of ongoing follow-up be monitored and reported separately.

Diagnostic Services: Genetic Services

Recommendation: It is recommended that the wait time be measured as the number of calendar days from the date the referral arrives in the Maritime Medical Genetics Service (MMGS) office to the date the patient has his or her first appointment.

Recommendation: It is recommended that the project adopt the priority bands and priority tool already in use by the MMGS (Table 3.7).

Recommendation: It is recommended that the target wait times for genetic services be as follows:

- urgent: within 2 weeks
- semi-urgent: 2 weeks to 3 months
- non-urgent: 3 to 6 months

Recommendation: It is recommended that, in the short term, Shire Management System (SMS) database software, already in use by the MMGS, be used to collect genetic services wait-time data.

Recommendation: It is recommended that, in the long term, the IWK Health Centre's hospital scheduling software module to be implemented at the MMGS be used to capture the data.

Recommendation: It is recommended that the Department of Health report the pediatric genetic services wait-time data to the public by case type.

Recommendation: It is recommended that the pediatric genetic services wait-time data be reported separate from the adult data and not be included in the calculation of any provincial statistics.

Diagnostic Services: Future Areas

Recommendation: It is recommended that the next diagnostic services to be developed for wait-time monitoring be the following (in order):

1. ultrasound
2. colonoscopy
3. nuclear medicine
4. mammography screening

Referrals from General Practitioner to Specialist: Gastroenterology

Recommendation: It is recommended that the wait time be measured as the number of calendar days from the date the referral is received by the specialist's office to the date of the consultation between the specialist and the referred patient.

Recommendation: It is recommended that the wait times be recorded and reported in three separate priority bands: P1 (most urgent), P2, and P3 (least urgent).

Recommendation: It is recommended that the priority tool currently in use in by the Division of Gastroenterology in Capital Health be used province-wide.

Recommendation: It is recommended that the target wait times for gastroenterology be as follows:

- P1: within 7 days
- P2: 8 days to 7 weeks
- P3: 7 weeks to 7 months

Recommendation: It is recommended that, in the short term, to expedite the process, the wait-time data be collected using a chart-review sampling methodology.

Recommendation: It is recommended that the offer put forth by Capital Health's Division of Gastroenterology to manage the collection and reporting of wait-time information for gastroenterology on a short-term sampling basis be accepted.

Recommendation: It is recommended that the current electronic patient scheduling systems and the electronic scheduling system being implemented as part of the NShIS be examined for their feasibility to capture and report wait-time information in the long term.

Recommendation: It is recommended that the Nova Scotia Department of Health ensure that the electronic systems selected for the primary care sector have the ability to collect the required wait-time information.

Recommendation: It is recommended that the Department of Health report gastroenterology wait times to the public by district health authority and that referring physicians have access to the wait times of individual gastroenterologists.

Recommendation: It is recommended that pediatric gastroenterology wait-time data be reported separate from the data on the adult population and not be included in the calculation of any provincial statistics.

Referrals from General Practitioner to Specialist: Medical Oncology

Recommendation: It is recommended that the wait time be measured as the number of calendar days from the date the referral is received by the specialist's office to the date of the consultation between the specialist and the referred patient.

Recommendation: It is recommended that Cancer Care Nova Scotia lead a process to establish a provincial standard for medical oncology in the province that includes priority bands, priority tools, and target wait times.

Recommendation: It is recommended that Cancer Care Nova Scotia, Nova Scotia Cancer Centre, and Cape Breton Cancer Centre investigate the feasibility of modifying the OPIS database to enable it to collect the desired information after a provincial standard for priority bands and a priority tool have been finalized.

Recommendation: It is recommended that the Department of Health report the medical oncology wait-time data to the public by facility and by location of the cancer.

Recommendation: It is recommended that pediatric medical oncology wait-time data be reported separate from the data on the adult population and not be included in the calculation of any provincial statistics.

Referrals from General Practitioner to Specialist: Plastic Surgery

Recommendation: It is recommended that the wait time be measured as the number of calendar days from the date the referral is received by the specialist's office to the date of the consultation between the specialist and the referred patient.

Recommendation: It is recommended that the wait times be recorded and reported using five priority bands: P1 (most urgent) to P5 (least urgent).

Recommendation: It is recommended that the adaptation of the diagnosis-based New Zealand Priority tool be used (Table 4.6).

Recommendation: It is recommended that the target wait times for plastic surgery be as follows:

- P1: within 3 days
- P2: 4 days to 3 weeks
- P3: 3 to 6 weeks
- P4: 6 weeks to 4 months
- P5: 4 to 6 months

Recommendation: It is recommended that, in the short term, to expedite the process, the wait-time data be collected using a chart-review sampling methodology.

Recommendation: It is recommended that the current electronic patient scheduling systems and the electronic scheduling system being implemented as part of the NShIS be examined for their feasibility to capture and report wait-time information in the long term.

Recommendation: It is recommended that the Department of Health report the plastic surgery wait-time data to the public by district health authority and that referring physicians have access to the wait times of individual plastic surgeons.

Recommendation: It is recommended that pediatric plastic surgery wait-time data be reported separate from the data on the adult population and not be included in the calculation of any provincial statistics.

Referrals from General Practitioner to Specialist: Future Areas

Recommendation: It is recommended that the future specialist referral areas to be developed for wait-time monitoring be the following (in order):

1. cardiology
2. geriatrics
3. neurology
4. dermatology

Next Steps: Advisory Committee

Recommendation: It is recommended that a Wait Time Monitoring Advisory Committee be established that will report to the Minister of Health. It will consist of members with a wide range of knowledge, experience, and expertise within the Nova Scotia health care system. It will have a strategic mix of clinical and administrative expertise but not necessarily representation from each stakeholder community. It will provide advice to the minister on wait-time monitoring issues, communicate with providers and the public on wait-time issues including the reporting of wait-time data, and will advise on the implementation and evaluation of the recommendations of this report that are adopted by the Department of Health. The committee will be chaired by a credible spokesperson and will be supported by resources from the Nova Scotia Department of Health.

Introduction

The Wait Time Issue

In February 2003, the Department of Health and the Office of Health Promotion jointly released a document entitled *Your Health Matters: Working Together Toward Better Care.*[1] The document addressed actions already taken, as well as plans for the future for management of health care in Nova Scotia. Wait times for health care services were highlighted as a major priority, especially since monitoring and reducing wait times is increasingly viewed as essential to the performance of a high-quality health care system and good patient outcomes.

That document outlined a plan for the management of wait times that included four components:

- getting meaningful, reliable information
- using the information to shorten wait lists and eliminate backlogs
- investing in the right equipment
- sharing more information to increase accountability

The first step in the plan is to collect accurate information on the actual times that patients wait for various health services in the province. This step is essential to developing appropriate strategies for shortening wait times.

Valid and reliable information on the performance of the health care system is critical for the effective management of the system. It provides the evidence required to make good decisions about the best allocation of resources. Without good information decisions may become hostage to unsubstantiated claims and anecdotal information. Action that is unsupported by reliable information is a poor substitute for careful evaluation and analysis.

Some health services within Nova Scotia currently record some form of wait-time data, but the standards and definitions used for its collection vary across the province. While this provides some insight into the scope and magnitude of the wait-time issue, the lack of standardization makes it difficult to objectively compare services from across the province to identify the areas that may be in the greatest need of review.

1. Nova Scotia. Department of Health, *Your Health Matters: Working Together Toward Better Care* (Halifax: The Department, 2003).

Standardized reporting of wait times for health services across the province would also provide an opportunity for patients and their physicians to make informed decisions about where to go to get tests completed or see specialists in shorter amounts of time. For example, patients and their physicians should know that an extra hour of travel time to see a specialist in a different community might reduce the wait by a significant amount, or conversely, staying in the community for diagnosis and care may mean a shorter wait than if referred to Halifax.

Provincial Wait-Time Monitoring Project Steering Committee

To address the need to capture meaningful, reliable provincial information on wait times, the Minister of Health announced a plan to standardize the collection and monitoring of wait times in Nova Scotia. As a result, the Provincial Wait Time Monitoring Project Steering Committee was formed to make specific recommendations on this initial phase. The committee's mandate does not extend to making recommendations on whether resources should be allocated to reduce existing wait times.

The steering committee consists of 18 members who represent the clinical community and health care administration from various health districts in the province and the Nova Scotia Department of Health. The co-chairs of the committee are Dr. Mike MacKenzie, Chief of Staff, Guysborough Antigonish Strait Health Authority, and Mary McKeen, Chief Information Officer, Nova Scotia Department of Health. Dr. Peter Glynn, Chair of the Saskatchewan Surgical Care Network (a project that monitors and manages wait times for all surgical services in Saskatchewan), is involved in an advisory capacity, sharing the experiences he gained working with the network.

The term of the committee is from April 2003 to April 2004. A complete steering committee membership list can be found in Appendix A and the committee's terms of reference can be found in Appendix B.

The committee was asked to submit its first report to the Deputy Minister in the fall of 2003. A second report, to follow in the spring of 2004, will include recommendations on the time frames and resources that will be required for implementing the recommendations described in the fall 2003 report.

Selecting Priority Wait-Time Areas

The steering committee focused on three wait-time areas, which are reflective of a large portion of the continuum of health care services. Given the magnitude of this effort, the committee identified specific services as starting points within each:

- **Surgical Services**
  - orthopedics
- **Diagnostic Services**
  - computed tomography (CT) scans
  - magnetic resonance imaging (MRI) scans
  - genetic services
- **Referrals from General Practitioner to Specialist**
  - gastroenterology
  - medical oncology
  - plastic surgery

Orthopedics was chosen as the first surgical service to be monitored because of known pressures in this area. As well, there was also the opportunity to build on wait-time monitoring work already begun in the Division of Orthopedics in Capital Health. CT/MRI and genetic services were also chosen because of the existing wait times.

The specific services chosen in the Referrals from General Practitioner to Specialist category were based on a consensus of the need and desire to include a variety of referral situations. Referral to gastroenterology represents a medical speciality; referral to plastic surgery represents a surgical speciality; and referral to medical oncology represents a speciality that is largely referred to by other specialists.

The focus of this project is on non-emergency tests, procedures and consultations.

Working Groups

Working groups were assembled to focus on each of the areas more closely. The task of each working group was to recommend to the steering committee appropriate data requirements and data collection methods, based on a review of work already done in other jurisdictions, their own expert opinions, and consultation with Nova Scotia's clinical community.

These groups consisted of five to seven members with clinical and administrative backgrounds who work within each of the priority areas, as well as members from the Nova Scotia Department of Health. Steering committee members served as co-chairs of each working group. Additional

members of the relevant clinical and administrative communities were invited to participate. For example, the working group on surgical services included representatives from all orthopedic services in the province and a general surgeon.

Complete membership lists can be found in Appendix C and the complete terms of reference can be found in Appendix D.

The working groups were asked to provide recommendations on each of the following:

- **Wait-time definition**—specific start and end times for measuring wait times.

  There are a number of different points along a patient's course through the health care system at which wait-time measurements can be started and stopped.

  For example, should a referral wait time start when the patient and his or her general practitioner make the decision to seek specialist consultation, or should it start when the referral letter from the general practitioner arrives at the specialist's office? The definition selected also has to be balanced against the ability to collect the information.

- **Priority bands**—categories that reflect the urgency levels of patients.

  The health care system responds by seeing higher-priority cases sooner than those of lower priority. As a result, there are differences in wait times among cases with different priorities. To reflect this in the reporting, wait times will be divided into different priority categories or bands. This section outlines the recommendations for the priority bands to be used.

  The focus of this project is on non-emergency care.

- **Priority tool**—consistent way to assign cases to priority bands.

  There must be a consistent method for assigning an individual case to a priority band so that health care professionals across the province are assigning patients a priority in the same way.

- **Target wait times**—suitable time frames for service delivery.

  These are based on clinical opinion and are meant to be goals or objectives toward which the system can strive to better serve patients. These times are not meant to be guarantees for services within particular lengths of time.

- **Wait-time information collection**—the systems (paper or electronic) that should be used in capturing and recording the information.

  This would include primarily the plans for the use of information management software, either currently in use or planned for the future.

- **Data reporting**—how wait-time information should be reported.

  Despite not being part of their mandate, the working groups felt it was appropriate to include recommendations for this area. For instance, should standardized wait time information be reported to the public by district health authority or by hospital or by any other appropriate category or field.

- **Future wait-time monitoring**—identification of future wait-time priorities.

  This involved identifying the health care areas that should be addressed in the next stages of the Provincial Wait Time Monitoring Project.

The working groups were also asked to share their findings and recommendations with the clinical community. For example, the Diagnostics Working Group circulated their work to all radiologists in Nova Scotia, to all members of the medical advisory committees of each district health authority and the IWK Health Centre, and to all diagnostic imaging managers in the province.

Review of Work Done in Other Jurisdictions

Each working group reviewed wait-time activities from other provinces and countries to provide a starting point based on the work already done in the area. From this research it could be seen that the problem of wait times for health services is universal. There were also a number of common strategies being employed to address wait times. These include the use of

- priority systems to make sure that the more urgent cases are seen sooner
- clinical criteria used to assign patients to priority categories
- target wait times
- universal referral guidelines so specialists can better assess patient urgency
- guidelines to allow general practitioners to address symptoms or diagnoses of patients who might otherwise be referred to specialists
- websites on which wait times are posted to allow patients and referring physicians to make informed choices on where to go for health care services
- centralized wait lists

As a result of this review, some strategies of a similar nature appear in the recommendations of this report. Overviews of the projects can be found in Appendix E.

Secretariat

Organization and research for the steering committee and working groups was completed by a secretariat that consisted of members from the Performance Measurement and Health Informatics Division of the Department of Health. Members of the secretariat are listed in Appendix F.

Organization of Report

The report has a chapter for each of the three health service areas chosen:

- Surgical Services
- Diagnostic Services
- Referrals from General Practitioner to Specialist

These chapters include the following sections:

- Current status of the service in Nova Scotia
- Wait-time data currently collected in Nova Scotia
- Working group mandate and composition
- Consultation with the clinical community
- Recommendations for wait-time information requirements:
  - wait-time definition
  - priority bands
  - priority tool
  - target wait times
- Recommendations for wait-time information collection
- Recommendations for wait-time information reporting
- Areas for future wait-time monitoring

The final chapter of this report, Next Steps, summarizes the upcoming tasks of the steering committee and its recommendations for the next phase of the project once its work is complete.

The appendices at the end of the report contain the memberships and terms of reference of the steering committee and working groups, as well as much of the background information reviewed for the project. Appendix G is a guide to the acronyms and abbreviations used in this report. Appendices J–M contain other background information specific to the various health service areas addressed in this report.

Surgical Services

Orthopedic Surgery

Current Status of Orthopedic Surgery in Nova Scotia

For the 2002–2003 fiscal year in Nova Scotia there were 27 orthopedic surgeons. Most of the surgeons practiced in Capital Health, but there were also orthopedic surgeons in Annapolis Valley Health, Pictou County Health Authority, and Cape Breton District Health Authority. Table 2.1 summarizes the numbers of orthopedic surgeons and service volumes for the four districts mentioned above. Orthopedic surgeons from Annapolis Valley Health provide South Shore Health with day surgery orthopedic clinics two days per month. Orthopedic surgeons in the surrounding districts provide orthopedic consultations via a clinic in Antigonish one day per month. There are three pediatric orthopedic surgeons at the IWK Health Centre, one of whom devotes half of her practice to adult patients at the QEII Health Sciences Centre.

As not all districts have orthopedic surgery services, residents are often referred outside of their own districts. Inflow of orthopedic surgery patients tends to be predominantly to Capital Health; however, patients are also often referred to nearby districts with orthopedic services.

Table 2.1: Orthopedic Services and Service Volumes for the Four Districts Providing Orthopedic Services for the Fiscal Year 2002–2003

District Health Authority	Site	Surgeons	Day Surgeries	Inpatient Surgeries	Total Surgeries
Annapolis Valley	Valley Regional	4	1080	771	1851
Pictou County	Aberdeen	2	334	547	881
Cape Breton	CBHCC	4	1089	1130	2219
Capital	QEII, Dartmouth General, and Hants	14.5*	3324	3378	6702
IWK Health Centre		2.5*	130	678	808
Provincal Total		**27**	**5,957**	**6,856****	**12,813****

Source: CIHI DAD, extracted October 21, 2003.

Does not include emergency procedures.

* 0.5 accounts for a surgeon whose practice is split between the QEII and IWK.

** These provincial totals include data from sites not listed in the table.

In 1999–2000, Nova Scotians had the highest rate of knee replacements of all Canadian provinces, with 99 knee replacements per 100,000 Nova Scotians, compared to 66 knee replacements per 100,000 Canadians.[2] These high rates can be partly explained by the high prevalence of arthritis in the province. In 2000, Nova Scotia had the highest prevalence of arthritis in the country at a rate of 23.3 per cent.[3] This translates into approximately 173,000 people.

Orthopedic Wait-Time Information Currently Collected in Nova Scotia

Currently, there is no province-wide method for capturing and reporting wait-time data for orthopedic services in Nova Scotia; however, wait times are monitored for the Capital Health Orthopedic Wait List Management Project. The objectives of this project are to

- centralize the list of patients waiting for services
- list patients by priority rating, as determined by physicians
- report wait times and patient volumes by patient, surgeon, and procedure
- report wait-list information prospectively

A database that was created for the project houses wait-list information for all patients waiting for a defined set of orthopedic surgeries in Capital Health, namely, hip replacements, knee replacements, arthroscopies, and more recently, back surgery. The database captures priority ratings of patients; however, it does not yet define the order of patients waiting for surgery, as the database is not a scheduling system. The information captured by the wait-list database is currently undergoing validation to assess the consistency of the use of the priority rating tool among physicians.

Surgical Services Working Group

The Surgical Services Working Group was formed with two steering committee members as co-chairs: Dr. Michael Dunbar and Ms Lynn Molloy. The working group consists of representatives from each of the orthopedic services in the province and also a general surgeon. Their mandate was to make recommendations to the steering committee on the following: wait-time definition, priority bands, priority rating tool, and target wait times. There was also time devoted to a discussion of some of the issues that affect wait times. Issues raised in this discussion appear in Appendix H (Potential Use of Wait-Time Information) and Appendix I (Factors Influencing Wait Times). A complete working group membership can be found in Appendix C and the terms of reference can be found in Appendix D.

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2. Nova Scotia. Department of Health, *Reporting to Nova Scotians on Comparable Health and Health System Indicators: Highlights and Discussion Report* (Halifax: The Department, 2002), p. 16.

3. Canada. Health Canada. *Arthritis in Canada, An Ongoing Challenge* (Ottawa: Health Canada, 2003), p. 10.

Consultation with the Clinical Community

To ensure that others in the clinical community had an opportunity to review and comment on the recommendations of the working group, a consultation strategy was implemented. The consultation consisted of a faxed summary of working group decisions and a short survey soliciting agreement or disagreement and comments regarding working group decisions. Forty-five surveys were faxed to chiefs of staff, medical directors, and orthopedic clinicians throughout Nova Scotia. Approximately half (53 per cent) of the surveys were completed and returned within a three-week time frame.

Survey respondents were predominantly in agreement with the decisions of the working group. There was some concern among respondents regarding the consistent application of the visual analogue scale (VAS) that was being recommended by the working group. Respondents emphasized the need for validation of the VAS through inter-rater and test-retest reliabilities. Survey responses also led to a change in priority band naming because the previously used terms "emergent, urgent, and elective" were emotive and had different meanings to different physicians.

Recommendations for Wait-Time Information Requirements

Wait-Time Definition

Recommendation: It is recommended that the wait time for surgery be measured as the number of calendar days from the date the original decision of surgical intervention between patient and surgeon is made to the date the procedure is performed.

Priority Bands

Recommendation: It is recommended that surgical wait times be recorded and reported using six priority bands: Priority A (highest) to F (lowest).

The primary focus of this project is on non-emergency care.

The working group recognized that different surgical services might not require the use of all bands, depending on the spectrum of urgencies that is commonly seen. In this case, bands can be combined. With the spectrum of urgencies commonly seen by orthopedic surgeons in Nova Scotia, it was decided that the six priority bands could be combined into three.

Recommendation: It is recommended that, specific to their needs, orthopedic services combine five of the six priority bands recommended for all surgical services into the following three priority bands:

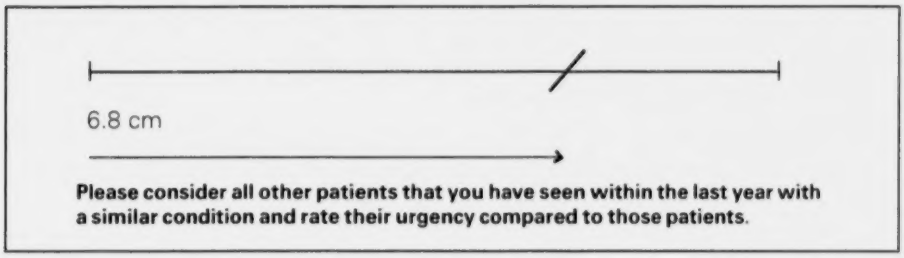
- Priority A
- Priority B/C
- Priority D/E

Priority Tool

To stimulate the discussion of priority tools, the project secretariat researched and provided background material on tools used in surgical wait-time measurement and management in other projects. The material included information primarily from the Western Canada Waiting List (WCWL) Project's Hip and Knee Replacement Priority Criteria Tool and New Zealand's Clinical Priority Assessment Criteria. A brief overview of these tools can be found in Appendix J.

The visual analogue scale (VAS) tool in use in the Capital Health Orthopedic Wait List Management Project was also reviewed. By placing a slash on an unmarked 10-cm horizontal line, a surgeon represents visually the relative urgency of a case compared to all other similar cases seen in the preceding year (Figure 2.1). Slashes made closer to the right represent higher levels of urgency. Measuring how far along the line the mark was made then captures a numerical score between 0 and 10. The VAS is used in conjunction with patient-completed tools of functional health status, including the Western Ontario and McMaster universities' (WOMAC) Osteoarthritis Index. The index is a self-administered patient questionnaire used to assess pain, disability, and joint stiffness in knee and hip osteoarthritis.

Figure 2.1: Capital Health's Orthopedic Wait List Management Project's Visual Analogue Scale with a Sample Mark Indicating a Score of 6.8


6.8 cm
Please consider all other patients that you have seen within the last year with a similar condition and rate their urgency compared to those patients.

Preference was given to the VAS over the other tools that were reviewed because of its ease of use. It was felt that the use of a tool that took longer to complete might act as a deterrent to the physicians who would be using it. Also factoring into the decision was that orthopedic surgeons in Capital Health already supported its use.

Recommendation: It is recommended that each case be assigned to a priority band using an unmarked 10-cm visual analogue scale (VAS) as currently used in the Capital Health's Orthopedic Wait List Management Project.

It is also recommended that the patient VAS scores not be assigned to the priority bands at this point. Waiting until some initial wait-time data have been collected will allow a greater understanding of the relationship between the scores and priorities.

The working group also suggested that validation of the VAS be undertaken in Nova Scotia to verify the likelihood that all orthopedic surgeons use the assessment tool in the same way. This will be done by determining the inter-rater and test-retest reliability of VAS scores using a number of written and video orthopedic test cases. The WCWL Project has agreed to support Nova Scotia is this activity by making available the written and video test cases used for their validation studies in return for the results of studies to be undertaken here.

Target Wait Times[4]

Recommendation: It is recommended that the target wait times for surgery be as follows:

- Priority A: within 24 hours
- Priority B: 24 hours to 3 weeks
- Priority C: 3 to 6 weeks
- Priority D: 6 weeks to 3 months
- Priority E: 3 to 6 months
- Priority F: more than 6 months

Even though the focus of this project is on the monitoring of non-emergency procedures, it was decided to also monitor the wait times for emergency surgical cases (within 24 hours) for the purposes of a complete data capture.

Recommendation: It is recommended that the orthopedic services adopt the target wait times recommended for all surgical services, but combine the time frames to match the combined priority bands:

- Priority A: within 24 hours
- Priority B/C: 24 hours to 6 weeks
- Priority D/E: 6 weeks to 6 months

This is consistent with the approach used in the Saskatchewan Surgical Care Network where not all surgical specialties use all the bands.

4. Target wait times are meant to be goals or objectives toward which the system can strive to better serve patients. They are not guarantees for service within particular lengths of time.

Recommendations for Wait-Time Information Collection

Several data collection options were considered by the working group and presented to the steering committee. These included the following:

- expand Capital Health's current wait-list data project to include the entire province for orthopedic surgery
- add new fields to the Discharge Abstract Database[5]
- use electronic scheduling software that is either currently implemented or being implemented in the province
- implement the Saskatchewan Surgical Registry wait-time monitoring software module

The steering committee considered the strengths and weaknesses of each option in making the following recommendations:

Recommendation: It is recommended that, in the short term, until a more permanent electronic system can be implemented, the Microsoft Access-based orthopedics wait-list data collection project in Capital Health be expanded to include all orthopedic surgery locations in the province.

Recommendation: It is recommended that the scheduling system currently being implemented as part of the Nova Scotia Hospital Information System (NShIS) project be tested to assess its feasibility as a long-term solution for the capture of surgical data.[6] This option should be initiated as soon as possible, starting with the sites that have already implemented the scheduling system (i.e., Guysborough Antigonish Strait and Cape Breton District health authorities).

Recommendation: It is recommended that, in the long term, operating room management software be implemented province-wide to support the efficient use of operating rooms in the province.

Recommendations for Wait-Time Information Reporting

Recommendation: It is recommended that the Department of Health report the orthopedic wait times to the public by district health authority and by major procedure based on volume and that referring physicians have access to the wait times of individual surgeons.

Recommendation: It is recommended that the referral patterns for orthopedics among district health authorities be reported to the public to show the percent and origin of patients referred to services outside of their district of residence.

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5. The Discharge Abstract Database is a record of information on all inpatient and day surgery hospital patients to track trends in procedure, disease, and hospital resource use for the purposes of planning and delivery of health services.

6. The Nova Scotia Hospital Information System (NShIS) is a project currently underway to implement hospital information systems in 34 hospitals in Nova Scotia's district health authorities, with the exception of Capital Health. It is expected to be fully implemented by 2005–2006. A plan is under development to ensure that NShIS will be interoperable with the systems already in place in Capital Health and the IWK Health Centre.

Recommendation: It is recommended that pediatric surgery wait-time data be reported separate from the data on the adult population and not be included in the calculation of any provincial statistics.

Areas for Future Surgical Services Wait-Time Monitoring

Recommendation: It is recommended that the next surgical services to be monitored be the following:

- general surgery
- urology

Diagnostic Services

Computed Tomography (CT) and Magnetic Resonance Imaging (MRI)

Current Status of CT and MRI in Nova Scotia

Currently in Nova Scotia, there are 15 CT scanner units, with at least one in each district. Table 3.1 lists the locations of all scanners in the province.

Table 3.1: Location of CT Scanners in Nova Scotia

District Health Authority	Hospital (CT scanners)	Location
South Shore	South Shore Regional Hospital (1)	Bridgewater
South West Nova	Yarmouth Regional Hospital (1)	Yarmouth
Annapolis Valley	Valley Regional Hospital (1)	Kentville
Colchester East Hants	Colchester Regional Hospital (1)	Truro
Cumberland	Cumberland Regional Health Care Centre (1)	Upper Nappan
Pictou County	Aberdeen Hospital (1)	New Glasgow
Guysborough Antigonish Strait	St. Martha's Regional Hospital (1)	Antigonish
Cape Breton	Cape Breton Regional Hospital (2)	Sydney
Capital	Dartmouth General Hospital (1) QEII Health Sciences Centre, VG site (2) QEII Health Sciences Centre, HI site (2)	Dartmouth Halifax Halifax
	IWK Health Centre (1)	Halifax

Source: Performance Measurement and Health Informatics Section, Information Management Branch, Nova Scotia Department of Health

Nova Scotia has three publicly funded MRI scanners. There are two at the QEII Health Sciences Centre (one at the Victoria General site and one at the Halifax Infirmary site). The third, which is at the IWK Health Centre, performs pediatric scans, but operates for adult patients from the QEII Health Sciences Centre MRI wait list 28 hours per week. Approval for the acquisition of an MRI scanner has been granted for the Cape Breton Regional Health Care Complex. This scanner is expected to be in operation by early 2004. In addition, there is one privately operated MRI scanner in Halifax Regional Municipality.

General practitioners can request CT scans (except for pediatric patients) but not MRI. Thus far, the radiology department at the QEII Health Sciences Centre has limited the requesting of MRI scans to specialists only.

Wait-Time Information Currently Collected in Nova Scotia

Wait-time data in the various districts are currently collected by each diagnostic imaging department and forwarded to the Department of Health. The methods used to collect the data, summarized in Table 3.2, are quite varied. They are "snapshot" estimations of waiting times taken on a single day of the month that represent how long a patient would likely have to wait for a scan if the department received the requisition that day.

Table 3.2: CT and MRI Wait-Time Estimation Methods in Nova Scotia

District Health Authority	Hospital	Estimation Method
South Shore	South Shore Regional	The number of working days until the next two available time slots
South West Nova	Yarmouth Regional	The number of working days until the next fourth available time slot
Annapolis Valley	Valley Regional	The number of working days until the next day with at least two open appointments
Colchester East Hants	Colchester	The number of working days until the next available time slot, taking into account any requisitions received but not yet booked
Cumberland	Cumberland Regional	Estimation of time until the next open time slot, accounting for requisitions received but not yet booked
Pictou County	Aberdeen	The number of working days until the next available appointment
Guysborough Antigonish Strait	St. Martha's	The number of working days until the next available appointment
Cape Breton	Cape Breton Regional	Estimation of the number of weeks until the next available appointment
Capital	QEII and Dartmouth General	The number of days until there are five or six open slots in a single day in the booking schedule accounting for requisitions received but not yet booked
	IWK	The time until the next available block of three or more open appointments

Source: Performance Measurement and Health Informatics Section, Information Management Branch, Nova Scotia Department of Health

The data show great variation in wait times among the scanner locations. It is important to remember that this can be explained partly by the different methods used. For example, the March 2003 wait for South Shore Regional Hospital was 10 working days, and in the same month, the wait for the Dartmouth General Hospital was 37 working days, almost four times as long. However, the South Shore Regional estimates the wait by counting the days until the next day with two open slots, whereas the Dartmouth General counts until the next day with five or six open slots, which would be a much longer time in any booking system. This type of variation would disappear with standardized monitoring.

Diagnostic Services Working Group

The Diagnostic Services Working Group was formed with two steering committee members as co-chairs: Dr. George Murphy and Dr. Mary Hutchison. The working group consists of two administrative staff members in the diagnostic imaging department at the QEII Health Sciences Centre and the Vice President of Operations from Annapolis Valley Health. Their mandate was to make recommendations to the steering committee on the following: wait-time definition, priority bands, priority tool, and target wait times. The working group membership can be found in Appendix C and the terms of reference can be found in Appendix D. There was also time devoted to a discussion of some of the issues that affect wait times. Issues raised in this discussion appear in Appendix H (Potential Use of Wait-Time Information) and Appendix I (Factors Influencing Wait Times).

Consultation with the Clinical Community

After the diagnostics working group decided upon an initial set of recommendations, a consultation survey was distributed to the clinical community: medical advisory committee (MAC) members of each district health authority, radiologists, and diagnostic imaging managers. The surveys requested feedback on the definition, priority bands, priority tool, and target wait times. A total of 225 surveys were distributed, and within four weeks 95 were returned, giving a response rate of 42 per cent. Feedback received in this consultation was considered for the final recommendations. As a result of the consultation, minor modifications were made to the priority tool and the target wait times.

Recommendations for Wait-Time Information Requirements

Wait-Time Definition

Recommendation: It is recommended that the wait time be measured as the number of calendar days from the date the requisition is received by the diagnostic imaging department to the date the scan is performed.

It was felt that limiting the definition to these start and stop times would exclude factors external to the scanning facility, such as the time it may take for a requisition to arrive. Ideally, suspensions or wait time days accrued due to patient-initiated rescheduling should be recorded and removed. This will ensure that the results reflect service provision factors only and will not carry the influence of patient factors. This exclusion will be dependent on the electronic information systems in use or to be implemented.

Priority Bands

Recommendation: It is recommended that the wait times be recorded and reported in three separate priority bands: P1 (most urgent), P2, and P3 (least urgent).

The waits measured for this project are only for non-emergency cases that are booked according to the next available time.

Priority Tool

To stimulate the discussions of priority tools, the project secretariat researched and provided some background material on tools used in diagnostic wait-time measurement and management in other jurisdictions. The material included information primarily from the MRI priority tools from the Western Canada Waiting List (WCWL) Project and the Ontario Joint Policy and Planning Committee's Ontario Waiting List (OWL) Project. Details of these tools can be found in Appendix K.

The tool recommended for use for the current project is based on a tool from the OWL Project (Figure 3.1). The OWL tool requires referring physicians to indicate with a check mark the level of severity that best describes the patient's current situation. That tool does not include any criteria for the determination of low, medium, or high severity levels, nor is there a score calculated to convert the results into priority bands.

Figure 3.1: The OWL Project MRI Priority Rating Index

Category	Low	Med	High
M (Morbidity): Risk of permanent morbidity with increased exam delay			
R (Results): Degree to which exam results will affect patient management			
I (Incapacity): Degree of patient's pain and/or suffering while waiting for MRI			

Before recommending it for use in the current project, changes were made to the OWL tool regarding the wording of the severity categories and a numerical scoring system was added.

Recommendation: It is recommended that each case be assigned to a priority band based on a score calculated from severity in three categories as shown in Figure 3.2 and that the total score from the three categories be translated into a priority band according to the following scheme:

- 3–5 = P3
- 6–8 = P2
- 9–12 = P1

The difference in the numerical values for low, medium, and high for the different categories is meant to assign different weights to the categories.

Figure 3.2: Recommended Priority Tool for CT and MRI Scans

Severity Category	Low	Med	High
Risk of increased morbidity with delay	1	3	5
Impact of results on patient management	1	3	4
Degree of pain/suffering while waiting	1	2	3

Target Wait Times[7]

Recommendation: It is recommended that the target wait times for CT and MRI be as follows:

- P1: 3 calendar days or less
- P2: 4 to 14 calendar days
- P3: 15 to 28 calendar days

The times recommended above reflect the opinions of working group members as well as suggestions made by respondents in the clinical consultation survey.

Recommendations for Wait-Time Information Collection

Recommendation: It is recommended that, in the short term, until electronic systems are in place across the province as per the Nova Scotia Hospital Information System (NShIS), wait times in all scanner locations be reported using the existing booking systems to count the number of calendar days until the next day with three available appointments.

Any requisitions that have been received by diagnostic imaging departments but not yet scheduled should be accounted for in this estimation. This count should be performed on the first working day of each month and then forwarded to the Department of Health. The three available appointments do not necessarily have to be adjacent slots.

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7. Target wait times are meant to be goals or objectives toward which the system can strive to better serve patients. They are not guarantees for service within particular lengths of time.

Capital Health should continue to report MRI and CT wait times by body part/scan type, and the remaining locations should make the distinction between head and body CT scan wait times.

Recommendation: It is recommended that, in the long term, all districts, except Capital Health, collect the wait-time data using the Imaging and Therapeutic Services module, to be implemented as part of the ongoing NShIS project.[8]

The Imaging and Therapeutic Services (ITS) module, which is to be implemented in all diagnostic imaging departments, can be used to automate the CT and MRI wait-time data collection.[9] The module can be designed such that the required start and end dates as well as the priority rating can be entered on the day of the scan.

Recommendation: It is recommended that the hospital information systems currently in use in Capital Health and at the IWK Health Centre be modified to collect the wait-time data.

Capital Health

All locations use the same information management software in their diagnostic imaging departments. Currently, the date the requisition is received cannot be recorded. The closest recorded time is the day the scan appointment is booked, which can differ from the actual date of receipt of the requisition by a few days. Accommodations will have to be made to account for this difference.

IWK Health Centre

The Diagnostic Imaging Department at the IWK uses a radiology information management software module. Modifications would have to be made to allow the collection of the date the request was received and the priority ratings.

Recommendations for Wait-Time Information Reporting

Recommendation: It is recommended that the Department of Health report the CT/MRI wait-time data to the public by district health authority, and by body part/scan type.

Recommendation: It is recommended that the pediatric CT/MRI wait-time data from the IWK Health Centre be reported separate from the adult data from the district health authorities and not be included in the calculation of any provincial statistics.

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8. The Nova Scotia Hospital Information System (NShIS) is a project currently underway to implement hospital information systems in 34 hospitals in Nova Scotia's district health authorities, with the exception of Capital Health. It is expected to be fully implemented by 2005–2006. A plan is under development to ensure that NShIS will be interoperable with the systems already in place in Capital Health and the IWK Health Centre.

9. The ITS software application's primary purpose is to record patient information, schedule appointments, produce summary reports, and track exam results related to imaging and therapeutic procedures.

The way in which most scans at the IWK are booked makes it difficult to make a direct comparison with the wait times from the districts. Only about 15 per cent of the pediatric MRI and CT scans at the IWK are booked based on next available appointments. Most cases are either emergent, and are completed right away, or are booked on a specific date to coincide with a clinic appointment or treatment or to accommodate having both CT and MRI scans that require sedation done at the same time. These latter cases should be reported separately.

Recommendation: It is recommended that scans booked in advance as part of ongoing follow-up be monitored and reported separately.

This will be helpful in determining how much of an impact this type of booking has on the capacity for all scans.

Genetic Services

Current Status of Genetic Services in Nova Scotia

The Maritime Medical Genetics Service (MMGS) provides genetic services to all three Maritime provinces. The service is based at the IWK Health Centre in Halifax. The majority of patients travel to the IWK for care, but through travel clinics and the use of telehealth, the service reaches a number of other sites in Nova Scotia and Prince Edward Island. Table 3.3 lists the locations of services provided by the MMGS. There have been a number of traveling clinic locations in New Brunswick, but not within the past several years.

Table 3.3: Services Provided by MMGS and Their Locations

Location	Clinic/Service
IWK Health Centre, Halifax	Medical Genetics Clinic Metabolic Clinic Fetal Assessment and Treatment Inpatient Obstetrics Inpatient Pediatrics
Queen Elizabeth Hospital, Charlottetown	Traveling Clinic
Prince County Hospital, Summerside	Traveling Clinic
41 Healthcare Facilities in Nova Scotia	Telehealth

Source: MMGS

Currently at the MMGS, there are two clinical geneticists. In addition, an oncologist saw patients one afternoon every two weeks until June 2003, and pediatricians do four to six metabolic clinics per month. Genetic counsellors together amount to 5.2 full-time equivalents (FTEs). Other allied health professionals include 1.0 FTE metabolic nurse (two half-time nurses) and 1.0 FTE nutritionist. Administrative assistance comprises 4.0 FTEs and there is a 0.8 FTE administrative coordinator.

The MMGS service has a high volume of referrals, especially in Nova Scotia. Tables 3.4 and 3.5 give an indication of the volumes, broken down into case type and urgency level.

Table 3.4: New Nova Scotian Referrals for April 1, 2002 to March 31, 2003

Case Type	Urgent	Semi-urgent	Routine	Total
Cancer	2	42	121	165
Prenatal	100	0	1	101
Pediatric	78	50	58	186
Metabolic	14	93	14	121
General	34	131	115	280
Total	228	316	309	853

Source: MMGS

Table 3.5: Nova Scotian Patients Seen by Counsellors for April 1, 2002 to March 31, 2003

Case Type	Urgent	Semi-urgent	Routine	Total
Cancer	3	38	41	82
Prenatal	83	3	0	86
Pediatric	75	49	22	146
Metabolic	12	87	13	112
General	40	168	29	237
Total	213	345	105	663

Source: MMGS

Wait-Time Information Currently Collected in Nova Scotia

The MMGS has been collecting wait list data for two years. They do so using Shire Management System (SMS) software. The reports currently created and submitted indicate the total number of patients on wait lists at a given time, and they are grouped into four categories of waiting lengths. The information in this form is meant to satisfy the requirements of MMGS's responsibility for reporting to each of the three Maritime provinces. Table 3.6 shows the numbers of patients waiting to be seen as of March 31, 2003.

Table 3.6: Total Nova Scotian Genetics Patients on Waiting List, March 31, 2003

Case Type	Waiting Lengths			
	0–6 months	6–12 months	1–2 years	2+ years
Cancer	75	26	49	45
Prenatal	0	0	0	0
Pediatric	38	29	54	77
Metabolic	4	3	0	1
General	76	70	97	86
TOTAL	193	128	200	209

Source: MMGS

Genetic Services Working Group

The recommendations for genetic services wait-time monitoring were formulated by a small subgroup of the main diagnostics working group:

- **Dr. George Murphy (Chair)**, Assistant District Chief, Diagnostic Imaging, Capital Health
- **Ms Amy Crowley**, Administrative Coordinator, MMGS, IWK Health Centre

Their mandate was to make recommendations to the steering committee on the following: wait-time definition, priority bands, priority tool, and target wait times. The terms of reference for all working groups can be found in Appendix D. There was also time devoted to a discussion of some of the issues that affect wait times. Issues raised in this discussion appear in Appendix H (Potential Use of Wait-Time Information) and Appendix I (Factors Influencing Wait Times).

Consultation with the Clinical Community

It was not necessary to complete a formal consultation, as was done for the other areas, since the MMGS is the only such service in the province, and it already had a priority system in use. However, the tool had not been revised in several years, so MMGS staff reviewed the tool and made some minor revisions to reflect more accurately their current opinions for priority ratings.

Recommendations for Wait-Time Information Requirements

Wait-Time Definition

Recommendation: It is recommended that the wait time be measured as the number of calendar days from the date the referral arrives in the MMGS office to the date the patient has his or her first appointment.

This definition is more of a referral time measurement, but with this service it is the measurement of interest, due to the lengthy waits to be seen. Since the service had already been assigned to the diagnostics working group, it remained within their scope, rather than being transferred to the General Practitioner to Specialist Referral Working Group.

Priority Bands and Priority Tools

Recommendation: It is recommended that the project adopt the priority bands and priority tool already in use by the MMGS.

The MMGS already uses a triage tool, which assigns referred patients into one of three urgency categories: urgent, semi-urgent, and non-urgent. This categorization is based on case types and criteria, which are summarized in Table 3.7.

Table 3.7: Priority Tool for the Maritime Medical Genetics Service

Case Type	Urgent	Semi-Urgent	Non-Urgent
Prenatal	• pregnant		
Cancer	• terminally ill	• metastatic disease • known mutation in the patient or family • diagnostic (multiple endocrine neoplasia, Von Hippel Lindau, etc.)	• other
General (16 yr and up)	• waiting to proceed with medical treatment	• carrier testing for common conditions with high detection rate (cystic fibrosis, spinal muscular atrophy, etc.) • new diagnosis • "actively" trying to conceive • post-therapeutic abortion	• other
Pediatric (under 16)	• new diagnosis • inpatient consult • waiting to proceed with medical treatment • positive neonatal screen	• child less than 3 months old with multiple congenital anomalies or dysmorphism • parents "actively" trying to conceive	• other
Metabolic (all ages)	• question of a metabolic disease in an acutely ill patient • metabolic crisis in an adult patient	• other	

Target Wait Times[10]

Recommendation: It is recommended that the target wait times for genetic services be as follows:

- urgent: within 2 weeks
- semi-urgent: 2 weeks to 3 months
- non-urgent: 3 to 6 months

These target times are already in use by the MMGS.

Recommendations for Wait-Time Information Collection

Recommendation: It is recommended that, in the short term, Shire Management System (SMS) database software, already in use by the MMGS, be used to collect genetic services wait-time data.

The clinic currently collects wait-time information using SMS database software. To create a report of the average or median wait times of patients who have already been seen would not require any changes to the current data collection. Wait times can be calculated using two of the currently used fields: the date the referral was received by the service and the date of the appointment. Priority ratings are also recorded in the field "Patient Status." Thus, it would be relatively easy to generate a report of wait times using the current information system.

Recommendation: It is recommended that, in the long term, the IWK Health Centre's hospital scheduling software module to be implemented at the MMGS be used to record the data.

It is expected that the hospital scheduling software module will be in use at the MMGS by February 2004; it is hoped that it will be able to capture the required information and the scheduling component of the SMS can be dropped.

Recommendations for Wait-Time Information Reporting

Recommendation: It is recommended that the Department of Health report the genetic services wait-time data to the public by case type.

Recommendation: It is recommended that the pediatric genetic services wait-time data be reported separate from the adult data and not be included in the calculation of any provincial statistics.

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10. Target wait times are meant to be goals or objectives toward which the system can strive to better serve patients. They are not guarantees for service within particular lengths of time.

Areas for Future Diagnostic Services Wait-Time Monitoring

Recommendation: It is recommended that the next diagnostic services to be developed for wait-time monitoring be the following (in order):

1. ultrasound
2. colonoscopy
3. nuclear medicine
4. mammography screening

Referrals from General Practitioner to Specialist

Referrals from General Practitioner to Specialist Working Group

The working group was formed with two steering committee members as co-chairs: Ms Mary-Ann Hiltz and Ms Vickie Sullivan. The working group consists of clinicians from Capital Health and Annapolis Valley Health and a number of administrators from Capital Health and the Department of Health. Their mandate was to make recommendations to the steering committee on the following: wait-time definition, priority bands, priority rating tool, and target wait times. There was also time devoted to a discussion of some of the issues that affect wait times. Issues raised in this discussion appear in Appendix H (Potential Use of Wait-Time Information) and Appendix I (Factors Influencing Wait Times). The working group membership can be found in Appendix C and the terms of reference can be found in Appendix D.

The working group addressed each of the three service areas selected for referrals from general practitioner to specialist.

- gastroenterology
- medical oncology
- plastic surgery

Each area is discussed in a separate section of this chapter.

Gastroenterology

Current Status of Gastroenterology in Nova Scotia

There were 16 gastroenterologists practicing in Nova Scotia for the 2002–2003 fiscal year.[11] While most practised in Halifax, there were also gastroenterologists in Truro, New Glasgow, Antigonish, and Sydney. Table 4.1 lists the number of gastroenterologists in each district.

11. Health Economics Section, Information Management Branch, Nova Scotia Department of Health.

Table 4.1: Gastroenterologists in Nova Scotia for the 2002–2003 Fiscal Year

District Health Authority	Specialists (Certified Specialists)*
South Shore	0
South West Nova	0
Annapolis Valley	0
Colchester East Hants	1 (0)
Cumberland	0
Pictou County	1 (1)
Guysborough Antigonish Strait	1 (0)
Cape Breton	1 (1)**
Capital	12 (5)
PROVINCE	**16 (7)**

Source: Health Economics Section, Information Management Branch, Nova Scotia Department of Health.

* "Specialists" are defined as physicians who devote the majority of their time to gastroenterology and may not include all physicians who only do gastroenterology as part of their practice. "Certified Specialists" are defined as physicians who have passed the Royal College of Physicians and Surgeons of Canada certification exams in gastroenterology.

** Cape Breton's gastroenterologist left in August 2002 making the present district total 0.

In the 2002–2003 fiscal year there were 8,278 referrals to gastroenterologists in Nova Scotia.[12] Almost all patients from South Shore Health, South West Health, and Annapolis Valley Health were seen in Halifax. It appears that patients from Cumberland Health Authority are referred equally to Halifax, New Glasgow, and Truro.

Wait-Time Information Currently Collected in Nova Scotia

Gastroenterologists in Capital Health have already done a fair amount of work in the area of wait-time management. They have developed standardized referral forms whereby the referring physician provides enough specific information so that the specialist can prioritize the referral when it is received. Referrals are grouped into three categories of urgency based on the diagnosis and/or symptoms described by the referring physician: C1 (the most urgent), C2, and C3 (the least urgent). Table 4.2 summarizes the priority tool.

12. Health Economics Section, Information Management Branch, Nova Scotia Department of Health.

Table 4.2: Capital Health's Gastroenterology Prioritization Tool

Urgency Category	Recommended Maximum Wait Time	Associated Diagnoses/Symptoms
C1 (most urgent)	7 days	upper GI bleed, dysphagia, acute jaundice, severe abdominal pain, repeated ER visits, X-ray suggesting possible carcinoma, bloody diarrhea, flare in inflammatory bowel disease
C2	7 weeks	inflammatory bowel disease with chronic problems, abdominal pain of less than six months duration, weight loss, rectal bleeding, severe dyspepsia
C3 (least urgent)	7 months	chronic dyspepsia, gastroesophageal reflux disease, chronic abdominal pain, chronic diarrhea, chronic constipation, irritable-bowel syndrome, clinically well with abnormal liver function tests, family history of colon cancer, Barett's screening, second opinions

In Capital Health, they have been successful in meeting the target for C1 patients; however, limited resources have made it impossible to meet the recommended maximum wait time for C2 and C3 patients. Functionally, patients from these two priority groups are merged into one wait list and are typically not seen within their targeted wait times.

A number of attempts have been made to reduce waiting times, including follow up with waiting patients and/or their physicians to reassess their need for service and the provision of a website for patients and physicians, enabling them to access needed information related to treatment. The website had some success with patients, but it was found that general practitioners had neither the time nor the Internet access in their offices to use it.

Consultation with the Clinical Community

Clinical leadership for the gastroenterology referral area was provided by Dr. Desmond Leddin, Head of the Division of Gastroenterology, Capital Health.

Dr. Leddin consulted with 15 gastroenterology colleagues from across the province. Each physician was given a summary of the proposed wait-time data requirements and was asked to indicate agreement or disagreement and to provide feedback. Within about three weeks, 11 of the 15 surveys were returned for a response rate of 73 per cent.

Recommendations for Wait-Time Information Requirements

Wait-Time Definition

Recommendation: It is recommended that the wait time be measured as the number of calendar days from the date the referral is received by the specialist's office to the date of the consultation between the specialist and the referred patient.

Other start times were considered, such as the day the patient and general practitioner make the decision to seek specialty consultation. It was decided to use the recommended start time as it excludes external factors over which a specialist's office may have no control and fits well with the operation of gastroenterology offices (referrals are stamped with the date they are received).

Priority Bands

Recommendation: It is recommended that the wait times be recorded and reported in three separate priority bands: P1 (most urgent), P2, and P3 (least urgent).

The primary focus of this project is on non-emergency care.

Priority Tool

To stimulate the discussion of priority tools, the project secretariat provided background material on tools used in gastroenterology referrals in other locations. Much of the work referenced is being done in New Zealand, where they have implemented guidelines for general practitioners as to what information should be included in a specialist referral as well as a tool for determining the priorities of referred patients. There are also target wait times for each priority level. A summary of the gastroenterology components from the New Zealand project that were reviewed for this project can be found in Appendix L.

England has also done some work in the area of specialist referral wait-time management, but their approach was based on diagnoses and symptoms rather than specialty.

The priority tool in use by the Division of Gastroenterology at Capital Health was also reviewed as part of this process. This tool can be seen in Table 4.2.

Recommendation: It is recommended that the priority tool currently in use in by the Division of Gastroenterology in Capital Health be used province-wide.

Target Wait Times[13]

Recommendation: It is recommended that the target wait times for gastroenterology be as follows:

- P1: within 7 days
- P2: 8 days to 7 weeks
- P3: 7 weeks to 7 months

These times reflect the clinical opinions of the gastroenterologists surveyed in the clinical consultation.

Recommendations for Wait-Time Information Collection

Several data collection options were considered by the working group and presented to the steering committee. These included the following:

- change the MSI physician claims system to capture wait-time information
- test the electronic scheduling systems currently in use or being implemented in the province as part of the NShIS project to determine their feasibility for capturing this information[14]
- implement a sampling methodology, using electronic data capture or chart-audit methods, to test the feasibility of this method before implementing something more comprehensive and on a wider scale

After considering the strengths and weaknesses of each option, the steering committee decided to make the following recommendations:

Recommendation: It is recommended that, in the short term, to expedite the process, the wait-time data be collected using a chart-review sampling methodology.

Recommendation: It is recommended that the offer put forth by Capital Health's Division of Gastroenterology to manage the collection and reporting of wait-time information for gastroenterology on a short-term sampling basis be accepted.

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13. Target wait times are meant to be goals or objectives toward which the system can strive to better serve patients. They are not guarantees for service within particular lengths of time.

14. The Nova Scotia Hospital Information System (NShIS) is a project currently underway to implement hospital information systems in 34 hospitals in Nova Scotia's district health authorities, with the exception of Capital Health. It is expected to be fully implemented by 2005–2006. A plan is under development to ensure that NShIS will be interoperable with the systems already in place in Capital Health and the IWK Health Centre.

Recommendation: It is recommended that the current electronic patient scheduling systems and the electronic scheduling system being implemented as part of the NShIS be examined for their feasibility to capture and report wait-time information in the long term.

Recommendation: It is recommended that the Nova Scotia Department of Health ensure that the electronic systems selected for the primary care sector have the ability to collect the required wait-time information.

Recommendations for Wait-Time Information Reporting

Recommendation: It is recommended that the gastroenterology wait times be reported to the public by district health authority and that referring physicians have access to the wait times of individual gastroenterologists.

Recommendation: It is recommended that pediatric gastroenterology wait-time data be reported separate from the data on the adult population and not be included in the calculation of any provincial statistics.

Medical Oncology

Current Status of Medical Oncology in Nova Scotia

There are cancer centres in both Halifax and Sydney. For the 2002–2003 fiscal year, there were eight medical oncologists in Halifax and two in Sydney.[15] The centre in Halifax operates satellite clinics in Yarmouth and New Glasgow, and the Sydney centre operates a clinic in Antigonish.

In the 2002–2003 fiscal year, 1,874 Nova Scotians were referred to medical oncologists within the province.[16] Medical oncologists operating from Halifax saw almost all oncology patients from districts other than the Guysborough Antigonish Strait and Cape Breton District health authorities. About half of the patients from the Guysborough Antigonish Strait Health Authority were seen by medical oncologists based in Sydney, with the other half being seen by medical oncologists based in Halifax. Almost all patients from the Cape Breton District Health Authority were referred to medical oncologists based in Sydney. The lowest number of referrals came from the Cumberland Health Authority, as many of these patients are seen in Moncton, New Brunswick. Table 4.3 summarizes the number and distribution of medical oncologists in Nova Scotia.

15. Health Economics Section, Information Management Branch, Nova Scotia Department of Health.
16. Same as footnote above.

Table 4.3: Medical Oncologists in Nova Scotia for the 2002–2003 Fiscal Year

District Health Authority	Specialists (Certified Specialists)*
South Shore	0
South West Nova	0
Annapolis Valley	0
Colchester East Hants	0
Cumberland	0
Pictou County	0
Guysborough Antigonish Strait	0
Cape Breton	2 (2)
Capital	8 (6)**
Provincial Total	**10 (8)**

Source: Health Economics Section, Information Management Branch, Nova Scotia Department of Health

* "Specialists" are defined as physicians who devote the majority of their time to medical oncology and may not include all physicians who only do medical oncology as part of their practice. "Certified Specialists" are defined as physicians who have passed the Royal College of Physicians and Surgeons of Canada certification exams in medical oncology.

** A medical oncologist left Halifax in June 2003, making the current district total 7 (5).

Wait-Time Information Currently Collected in Nova Scotia

Wait times for all oncology patients in Nova Scotia (both to consult and to procedure) are currently captured in the Oncology Patient Information System (OPIS), which is managed through a partnership with Cancer Care Nova Scotia (CCNS) and Capital Health and Cape Breton District Health Authority. The OPIS software is used for patient registration, referral processing, and physician and treatment scheduling. The Nova Scotia Cancer Centre (NSCC) in Capital Health and the Cape Breton Cancer Centre (CBCC) in the Cape Breton District Health Authority both use OPIS to capture wait times, but use different processes for managing consultations.

Nova Scotia Cancer Centre

The NSCC referral office at the QEII Health Sciences Centre uses a set of guidelines to assign the referrals they receive to one of two urgency categories (emergency/urgent and normal) and to assign target wait times. The guidelines are based on the location of the cancer and associated clinical criteria. Table 4.4 shows a sample of the criteria and target times for breast cancer cases. Criteria for nine other cancer locations are listed in Appendix M. Standardized referral forms ensure that referring physicians forward all the information that is required for prioritization.

Table 4.4: Priorities and Target Wait Times for Breast Cancer Cases used by the Nova Scotia Cancer Centre

Criteria	Priority	Target Wait Time
• mastectomy: < 1 cm tumour, node negative	• may not require referral	
• breast conserved: ≥ 1 cm tumour, node negative • breast conserved: node positive • mastectomy: ≥1 cm tumour, node negative • mastectomy: node positive	• normal	• 6 weeks
• locally advanced breast cancer: for preoperative chemotherapy	• normal	• 2 weeks
• urgent recurrent/metastatic breast cancer • inflammatory breast carcinoma	• normal	• 1 week

Cape Breton Cancer Centre

Prioritization of referrals takes place based on the information provided on a standard referral form. There are four categories of urgency (with time frames) into which patients are assigned: immediately/urgent (within 48 hours), ASAP (within two weeks), soon (six to eight weeks), and other (physicians can provide their own time frame). Immediate/urgent is recommended for all oncology emergencies, ASAP is recommended for small cell lung cancer and lymphoma, and soon is recommended for breast and colon cancer.

Medical Oncology Wait-Time Reporting

Wait times for both the NSCC and the CBCC are recorded and reported using the OPIS database. It is capable of generating wait-time reports for consultations for medical oncology as well as for palliative care, psychiatric oncology, radiation oncology, surgical oncology and support services. The wait times can also be reported by type of cancer. Wait times for consultations are not currently reported by patient priority because this information is not captured in the database. OPIS does not have the capability to capture and report this information.

Recommendations for Wait-Time Information Requirements

Wait-Time Definition

Recommendation: It is recommended that the wait time be measured as the number of calendar days from the date the referral is received by the specialist's office to the date of the consultation between the specialist and the referred patient.

Priority Bands, Priority Tools, and Target Wait Times

To stimulate the discussions of data requirements, the project secretariat researched and provided background material on the priority bands, priority tools, and target wait times used in medical oncology referrals in other jurisdictions. Much of the work referenced is being done in New Zealand and can be found in Appendix N.

Consideration was also given to the tools already in use in the oncology departments at the QEII Health Sciences Centre and in the Cape Breton Health Care Complex. Descriptions of these can be found above in the section Wait-Time Information Currently Collected in Nova Scotia.

Recommendation: It is recommended that Cancer Care Nova Scotia lead a process to establish a provincial standard for medical oncology that includes priority bands, priority tools, and target wait times.

Recommendations for Wait-Time Information Collection

Recommendation: It is recommended that Cancer Care Nova Scotia, Nova Scotia Cancer Centre, and Cape Breton Cancer Centre investigate the feasibility of modifying the OPIS database to enable it to collect the desired information after a provincial standard for priority bands and a priority tool have been finalized.

Recommendations for Wait-Time Information Reporting

Recommendation: It is recommended that the medical oncology wait-time data be reported to the public by facility and by type of cancer.

Recommendation: It is recommended that pediatric medical oncology wait-time data be reported separate from the data on the adult population and not be included in the calculation of any provincial statistics.

Plastic Surgery

Current Status of Plastic Surgery in Nova Scotia

In the 2002–2003 fiscal year, there were 12 plastic surgeons in Nova Scotia. There were seven in Halifax, two in Bridgewater, and one in each of Dartmouth, Antigonish, and New Waterford.[17]

About 90 per cent of South Shore Health patients referred to a plastic surgeon were seen in Bridgewater, with most of the remainder being seen in Halifax/Dartmouth. Patients from South West Health and Annapolis Valley Health were referred at an almost even rate to Bridgewater and Halifax/Dartmouth. About 90 per cent of the patients from the Colchester East Hants and Cumberland district health authorities are seen in Halifax/Dartmouth, with most of the remainder seen in Antigonish.[18] In total, 13,330 Nova Scotians were referred to plastic surgeons in this province for consultation in the 2002–2003 fiscal year.[19] Many more were referred to general surgeons, neurosurgeons, and orthopedic surgeons (and other specialties as well) for problems typically dealt with by plastic surgeons. This is especially true for patients residing in districts without a plastic surgeon. Table 4.5 summarizes the number of plastic surgeons in Nova Scotia.

Table 4.5: Plastic Surgeons in Nova Scotia for the 2002–2003 Fiscal Year.

District Health Authority	Specialists (Certified Specialists)*
South Shore	2 (2)**
South West Nova	0
Annapolis Valley	0
Colchester East Hants	0
Cumberland	0
Pictou	0
Guysborough Antigonish Strait	1 (1)
Cape Breton	1 (1)
Capital	8 (7)
Provincial Total	**12 (11)**

Source: Health Economics Section, Information Management Branch, Nova Scotia Department of Health.

* "Specialists" are defined as physicians who devote the majority of their time to plastic surgery and may not include all physicians who only do plastic surgery as part of their practice. "Certified Specialists" are defined as physicians who have passed the Royal College of Physicians and Surgeons of Canada certification exams in plastic surgery.

** A plastic surgeon came to South Shore Health in July 2003, making the new district total 3(3).

17. Health Economics Section, Information Management Branch, Nova Scotia Department of Health.
18. Same as footnote above.
19. Same as footnote above.

Consultation with the Clinical Community

Dr. Leif Sigurdson, Plastic Surgeon, QEII Health Sciences Centre, provided clinical leadership for the plastic surgery component of the General Practitioner to Specialist Referral Working Group. He consulted with his plastic surgery colleagues from across the province soliciting suggestions for and opinions on the wait-time information requirements. Within about a month's time, the response rate was nearly 50 per cent. The recommendations were based on the majority opinions of those who responded.

Recommendations for Wait-Time Information Requirements

Wait-Time Definition

Recommendation: It is recommended that the wait time be measured as the number of calendar days from the date the referral is received by the specialist's office to the date of the consultation between the specialist and the referred patient.

Priority Bands

Recommendation: It is recommended that the wait times be recorded and reported using five priority bands: P1 (most urgent), to P5 (least urgent).

The focus of this project is on non-emergency care.

Priority Tool

It was decided to create a priority tool based on one already in use in New Zealand (Appendix O). Minor changes were made to the list of diagnoses to better reflect the types of cases commonly seen in the province. Table 4.6 shows the recommended tool.

Table 4.6: Recommended Plastic Surgery Priority Tool

Priority Band	Diagnoses
P1	soft tissue defect acute, burns (minor), vascular malformation with obstruction, maxillo-facial abnormalities (post traumatic), facial palsy with corneal exposure
P2	foreign body removal, breast reconstruction immediate, lesion suspicious for melanoma, melanoma re-excision
P3	pressure sores, other chronic sores and ulcers (e.g. diabetic, venous stasis), cleft lip and palate, other congenital craniofacial abnormalities, stenosing tenosynovitis (e.g. de Quervains), flexor tendon injuries (late), carpal tunnel and other nerve compression syndromes with permanent numbness, ingrown fingernail or toenail, trigger finger, lesion suspicious for basal cell carcinoma, lesion suspicious for squamous cell carcinoma, basal cell carcinoma with positive margins, squamous cell carcinoma with positive margins
P4	soft tissue defect chronic, scar revision and scar management visible area, vascular malformations with no obstruction, hidradenitis suppurativa, lymphoedema, liposuction in abnormal cases, ventral hernia, facial palsy without corneal exposure, tongue reduction, tongue-tie affecting speech, tongue-tie not affecting speech, nasal reconstruction, nasal obstruction, ectropion, eyelid reduction involving visual axis, ear reconstruction (congenital and traumatic abnormalities), prominent ears, breast reconstruction delayed, congenital abnormalities of the breast, congenital hand deformities, secondary hand surgery after injury (chronic), carpal tunnel and other nerve compression syndromes with episodic numbness, nerve palsies, neuroma late (e.g. digital), rheumatoid or osteoarthritic hand deformities, Dupuytrens contracture, premalignant conditions (e.g. actinic keratosis, actinic cheilitis), lipoma interfering with function
P5	scar revision and scar management non-visible area, axillary hyperhidrosis, chest wall deformities (e.g. pectus excavatum), abdominal redundancy (pannus), nasal deformity, rhinophyma, ptosis (levator weakness), breast reduction, gynaecomastia, mastopexy, ganglion and soft tissue tumours of the hand, benign nevus, benign lesion (e.g. seborrheic keratosis), cyst (e.g. inclusion), lipoma not interfering with function

Recommendation: It is recommended that the adaptation of the diagnosis-based New Zealand priority tool be used.

Target Wait Times[20]

Recommendation: It is recommended that target wait times for plastic surgery be as follows:

- P1: within 3 days
- P2: 4 days to 3 weeks
- P3: 3 to 6 weeks
- P4: 6 weeks to 4 months
- P5: 4 to 6 months

20. Target wait times are meant to be goals or objectives toward which the system can strive to better serve patients. They are not guarantees for service within particular lengths of time.

Recommendations for Wait-Time Information Data Collection

The same data collection options that were considered for gastroenterology (see p. 31) were also considered for plastic surgery. The steering committee made the following recommendations for plastic surgery:

Recommendation: It is recommended that, in the short term, to expedite the process, the wait-time data be collected using a chart-review sampling methodology.

Recommendation: It is recommended that the current electronic patient scheduling systems and the electronic scheduling system being implemented as part of the NShIS be examined for their feasibility to capture and report wait-time information in the long term.

Recommendations for Wait-Time Information Reporting

Recommendation: It is recommended that the Department of Health report the plastic surgery wait-time data to the public by district health authority and that referring physicians have access to the wait times of individual plastic surgeons.

Recommendation: It is recommended that pediatric plastic surgery wait-time data be reported separate from the data on the adult population and not be included in the calculation of any provincial statistics.

Areas for Future Specialist Referral Wait-Time Monitoring

Recommendation: It is recommended that the future specialist referral areas to be developed for wait-time monitoring be the following (in order):

1. cardiology
2. geriatrics
3. neurology
4. dermatology

Next Steps

Implementation Strategy

This report represents the completion of the first stage of the project. The next report due from the steering committee is the Implementation Strategy. It will identify the tasks that need to be completed to implement the recommendations of the steering committee including resource requirements, changes to electronic systems, participants, time lines, ongoing operational support, reporting requirements, and a communication strategy. This report will be presented to the Deputy Minister of Health in the spring of 2004.

Advisory Committee

The steering committee recognizes that the work completed to date represents an important first step towards the capture and reporting of standardized province-wide wait-time information for the entire health care system. To ensure that this work continues and is given the profile that it deserves, the steering committee proposes the following recommendation:

Recommendation: It is recommended that a Wait Time Monitoring Advisory Committee be established that will report to the Minister of Health. It will consist of members with a wide range of knowledge, experience, and expertise within the Nova Scotia health care system. It will have a strategic mix of clinical and administrative expertise but not necessarily representation from each stakeholder community. It will provide advice to the minister on wait-time monitoring issues, communicate with providers and the public on wait-time issues including the reporting of wait-time data, and will advise on the implementation and evaluation of the recommendations of this report that are adopted by the Department of Health. The committee will be chaired by a credible spokesperson and will be supported by resources from the Nova Scotia Department of Health.

Appendices

Appendix A: Steering Committee Membership

- **Dr. Michael MacKenzie (Co-chair)**, Chief of Staff, Guysborough Antigonish Strait Health Authority
- **Mary McKeen (Co-chair)**, Chief Information Officer, Nova Scotia Department of Health
- **Vickie Sullivan**, Director, Cancer Care Program, Capital Health
- **Dr. Charles Lo**, District Chief, Diagnostic Imaging, Capital Health
- **Dr. George Murphy**, Assistant District Chief, Diagnostic Imaging, Capital Health
- **Dr. Michael Dunbar**, Orthopedic Surgeon, Capital Health
- **Dr. Paul MacDonald**, Cardiologist, Cape Breton District Health Authority
- **Dr. Mary Hutchison**, Family Physician, North Sydney
- **Anne McGuire**, Chief Executive Officer, Annapolis Valley Health
- **Cheryl Northcott**, Vice President Patient Care Services, Cumberland Health Authority
- **Mary-Ann Hiltz**, Director of Quality Resources and Decision Support Services, IWK Health Centre
- **Dr. David Rippey**, Senior Medical Advisor, Executive Director for Quality, Emergency Health Services, and Health Protection, Nova Scotia Department of Health
- **Brenda Payne**, Director, Acute Care, Nova Scotia Department of Health
- **Keith Menzies**, Executive Director, Continuing Care, Nova Scotia Department of Health
- **Dr. Jim Millar**, Executive Director, Mental Health and Physician Services, Nova Scotia Department of Health
- **Lynn Molloy**, Orthopedic Wait List Management Project Coordinator, Capital Health
- **Dr. Tom Ward** (ex-officio), Deputy Minister, Nova Scotia Department of Health

Appendix B: Steering Committee Terms of Reference

Committee:	Provincial Wait Time Monitoring Project Steering Committee
Authority:	Nova Scotia Department of Health
Reporting to:	Deputy Minister of Health
Term:	April 2003 to April 2004

Background

Wait-time information is increasingly viewed as essential to the performance of a high-quality health care system and good patient outcomes. The Department of Health and the Office of Health Promotion jointly released a document entitled *Your Health Matters: Working Together Toward Better Care*, which describes the importance of wait-time information and how the government plans to address the need to monitor and reduce wait times in selected areas.

A number of provinces have developed and implemented methods to monitor and report on wait times, and in February 2003 the First Ministers agreed to report on selected wait times as part of their commitment to public accountability.

Committee Mandate

The mandate of the Provincial Wait Time Monitoring Project Steering Committee is to develop and recommend strategies for standardized collection and reporting of wait-time information for selected services within the Nova Scotia health care system. The committee will also identify opportunities and potential strategies to reduce wait times for these services.

The committee will

- identify key priority areas for which wait-time information is to be collected and reported
- develop a plan to report on priority areas that includes standard definitions, processes, resources, costs, implementation, time lines, frequency, and format
- identify how the information can be used to shorten wait times
- identify opportunities and potential strategies to reduce wait times for the key priority areas
- make recommendations to the Deputy Minister of Health

Deliverables

In the fall of 2003, the steering committee will present the Deputy Minister of Health with an interim report on the Wait Time Monitoring Project. This document will include wait-time information currently available in Nova Scotia on the selected priorities and make recommendations to improve comparable reporting of wait times for these services. In addition, this document will identify opportunities and potential strategies to reduce wait times in these areas.

In the Spring of 2004, the steering committee will present its final report to the Deputy Minister, which will include a detailed implementation plan for expanded wait-time monitoring in Nova Scotia for the key priority areas.

Roles and Responsibilities

The steering committee will establish working groups of subject matter experts for each of the identified priority areas. The co-chairs in consultation with the steering committee will determine membership on the working groups. Research and administrative support for the committee and working groups will be provided by the project coordinator (Brenda Ryan) and the staff of the Performance Measurement and Health Informatics section of the Department of Health. The roles and responsibilities of the steering committee are outlined below.

Co-Chairs

- provide leadership to the steering committee and working groups
- respond to media requests regarding the Wait Time Monitoring Project
- chair steering committee meetings
- communicate with the project coordinator on a regular basis with respect to development of meeting agendas, meeting follow-up, research, and document preparation

Committee Members

- provide input, advice, and direction to the committee
- attend meetings
- collaborate on the development of recommendations submitted to the Deputy Minister

Working Groups

- review and discuss current data collection processes, relevant wait-time monitoring initiatives, and national standards on wait times
- recommend to the steering committee:
  - a standard definition of wait time for their subject area
  - a feasible process for reporting comparable data
- identify a strategy for consistent ongoing reporting of wait times, including resource and information system requirements to support this approach
- identify, where possible, potential strategies to reduce wait times

Project Coordinator

- coordinates secretariat support to working groups and the steering committee (setting up meetings, research, document preparation, etc.)
- organizes staff support for the committee and its working groups

Meetings

The steering committee and working groups will meet 8–10 times from April 2003 to April 2004 to complete the work within the established time frame.

Appendix C: Working Groups' Memberships

Surgical Services Working Group

- **Dr. Michael Dunbar (Co-Chair),** Orthopedic Surgeon, Capital Health
- **Lynn Molloy (Co-Chair),** Orthopedic Wait List Management Project Coordinator, Capital Health
- **Dr. Eric Howatt,** Orthopedic Surgeon, Annapolis Valley Health
- **Dr. Kevin Orrell,** Orthopedic Surgeon, Cape Breton District Health Authority
- **Dr. Geof Porter,** General Surgeon, Capital Health
- **Dr. Samir Chhabra,** Orthopedic Surgeon, Pictou County Health Authority

Diagnostic Services Working Group

- **Dr. George Murphy (Co-Chair)**, Assistant District Chief, Diagnostic Imaging, Capital Health
- **Dr. Mary Hutchison (Co-Chair)**, Family Physician, North Sydney
- **Stuart MacTavish**, VP Operations, Annapolis Valley Health
- **Frankie Fougere**, Manager, Special Imaging, Capital Health
- **Janice Rafuse**, Diagnostics and Imaging Booking Clerk, Capital Health

Genetic Services Working Group

- **Dr. George Murphy (Chair)**, Assistant District Chief, Diagnostic Imaging, Capital Health
- **Amy Crowley**, Administrative Coordinator, Maritime Medical Genetics Service, IWK Health Centre

General Practitioner to Specialist Referral Working Group

- **Mary-Ann Hiltz (Co-Chair)**, Director, Quality Resources and Decision Support Services, IWK Health Centre
- **Vickie Sullivan (Co-Chair)**, Director, Cancer Care Program, Capital Health
- **Dr. Jane Brooks**, Head, Department of Family Medicine, Annapolis Valley Health
- **Dr. Paul MacDonald**, Cardiologist, Cape Breton District Health Authority
- **Jill Flinn**, Health Services Manager, Nova Scotia Cancer Centre, Capital Health
- **Heather MacPherson**, Administrator, Department of Medicine, Capital Health
- **Brenda Payne**, Director, Acute and Tertiary Care, Nova Scotia Department of Health

Appendix D: Working Groups Terms of Reference

Committee: Provincial Wait Time Monitoring Project Working Groups

Authority: Nova Scotia Department of Health

Reporting to: Provincial Wait Time Monitoring Project Steering Committee

Term: April 2003 to April 2004

Background

Wait-time information is increasingly viewed as essential to the performance of a high-quality health care system and good patient outcomes. The Department of Health and the Office of Health Promotion jointly released a document entitled *Your Health Matters: Working Together Toward Better Care*, which describes the importance of wait-time information and how the government plans to address the need to monitor and reduce wait times in selected areas.

A number of provinces have developed and implemented methods to monitor and report on wait times, and in February 2003 the First Ministers agreed to report on selected wait times as part of their commitment to public accountability.

Mandate of Working Groups

The mandate of the working groups is to develop and recommend strategies for standardized collection and reporting of wait-time information for selected services within the Nova Scotia health care system. The working groups will also identify opportunities and potential strategies to reduce wait times for these services. The working groups will make recommendations to the Provincial Wait Time Monitoring Project Steering Committee.

Deliverables

In the fall of 2003, the working groups will present to the steering committee recommendations on how to collect and report on the key priority areas identified by the steering committee. This document will include wait-time information currently available in Nova Scotia on the selected priorities and make recommendations to improve comparable reporting of wait times for these services. In addition, this document will identify opportunities and potential strategies to reduce wait times in these areas.

In the spring of 2004, the working groups will present their final recommendations to the steering committee including a detailed implementation plan for wait-time monitoring in Nova Scotia for the key priority areas.

Working Group Membership

The working groups will consist of 6-8 members each.

Roles and Responsibilities

The working groups will consist of subject matter experts for each of the identified priority areas. Research and administrative support will be provided by the Project Coordinator (Brenda Ryan) and the staff of the Performance Measurement and Health Informatics section of the Department of Health. The roles and responsibilities of the working groups are outlined below.

- Review and discuss current data collection processes, relevant wait-time monitoring initiatives, and national standards on wait times.
- Recommend to the steering committee:
  - a standard definition of wait time for their subject area
  - a feasible process for reporting comparable data
- Identify a strategy for consistent ongoing reporting of wait times, including resource and information system requirements to support this approach.
- Identify, where possible, potential strategies to reduce wait times.

Meetings

The working groups will meet 8–10 times from April 2003 to April 2004 to complete the work within the established time frame.

Priority Waiting Time Area: Surgery

Preamble: The secretariat will gather, review, and package the information for the working group to consider. The working group will come together to make decisions about the material circulated.

Using orthopedics as the first surgical area explored, the working group is charged with the responsibility to make recommendations to the steering committee on the following issues related to monitoring wait times for surgery:

- Define waiting time from specialist to surgery for orthopedics and for all surgical services; consider both short- and long-term definitions, if appropriate.
- Review and select priority rating tool(s) for orthopedics and for all surgical services, if appropriate; consider short- and long-term implications.
- Review and recommend priority bands for waiting for orthopedics and for all surgical services; consider both short- and long-term implications.
- Review and recommend target wait times by priority band for orthopedics and for all surgical services; consider both short- and long-term implications.

- Consult with the clinical community on the recommendations of the working group.
- Develop options for monitoring and reporting waiting times for orthopedics and for all surgical services; develop both short- and long-term recommendations.
- Describe how this information can be used to improve wait times for orthopedics and for all surgical services.
- Describe possible management strategies to reduce waiting times for orthopedics and for other surgical services.
- Prioritize the approach to the other surgical services for consideration by the steering committee.

Priority Waiting Time Area: Diagnostics

Preamble: The secretariat will gather, review, and package the information for the working group to consider. The working group will come together to make decisions about the material circulated.

The working group is charged with the responsibility to make recommendations to the steering committee on the following:

- Define wait time for MRI, CT, and genetic services; consider both short- and long-term definitions, if appropriate.
- Review and select a priority rating tool(s) for prioritizing those needing access to MRI, CT, and genetic services; consider short- and long-term implications.
- Review and recommend priority bands for waiting for MRI, CT, and genetic services; consider both short- and long-term implications.
- Review and recommend target wait times by priority band for MRI, CT, and genetic services; consider both short- and long-term implications.
- Consult with the clinical community on the recommendations of the working group.
- Develop options for monitoring and reporting waiting times for MRI, CT, and genetic services; develop both short- and long-term recommendations.
- Describe how this information can be used to improve waiting times for MRI, CT, and genetic services.
- Describe possible management strategies to reduce waiting times for MRI, CT, and genetic services.
- Prioritize the remaining diagnostic modalities for consideration by the steering committee.

Priority Waiting Time Area: General Practitioner to Specialist Referrals

Preamble: The secretariat will gather, review, and package the information for the working group to consider. The working group will come together to make decisions about the material circulated.

The working group is charged with the responsibility to develop and make recommendations to the steering committee on the following:

- Define waiting time from general practitioner to specialist; consider both short- and long-term definitions, if appropriate.
- Prioritize medical and surgical referral priorities through appropriate means such as focus groups and surveys, with both the general practitioner and the specialist community.
- Review and select priority rating tools for the selected specialties; consider both short- and long-term implications.
- Review and select priority bands for waiting for the selected areas; consider both short- and long-term implications.
- Review and select target wait times by priority band for the selected areas; consider both short- and long-term implications.
- Describe the referral process and consider recommendations for improvement.
- Consult with the clinical community on the recommendations of the working group.
- Develop options for monitoring and reporting waiting times for general practitioner to specialist; develop both short- and long-term recommendations.
- Describe how this information can be used to improve wait times for the selected areas.
- Describe possible management strategies to reduce wait times for specialty consultations.
- Prioritize the remaining specialty areas for consideration by the steering committee.

Appendix E: Review of Other Wait-Time Activities

Other Countries

New Zealand

In March of 2000, the New Zealand Government released a document entitled, *Reduced Wait Times for Public Hospital Elective Services.* The major objectives included national equity of access to elective services; sufficient access to elective surgery before patients reach a state of unreasonable distress, ill health, and/or incapacity; as well as a maximum waiting time of six months for surgery and specialist referrals.

To ensure equity of access and to better manage wait times, specialty-specific referral guidelines and assessment criteria have been developed for 29 medical and surgical specialties. The standardized referral guidelines describe the information that should accompany referrals to specialists, such as past medical history, details of presenting symptoms, recent trials of treatment, concurrent medical conditions, etc. The referral priority criteria, referred to as Access Criteria for First Specialist Assessment (ACA), are used to assign cases to a particular urgency category based on diagnoses, symptoms, and/or test results. Each urgency category has an associated maximum wait time. The Clinical Priority Assessment Criteria (CPAC), similar in nature to the ACA, assist the specialists in assessing relative patient need and the potential for benefit from treatment.

Efforts are also being made to reduce the number of referrals to specialists. Primary Care Management Guidelines have been developed to assist general practitioners with their management of specific, lower-priority conditions without referral to a specialist.

Eight Elective Service Performance Indicators (ESPIs) are used to help determine if the performance goals are being met. Each one sheds light on a different stage in the movement of patients through elective services. One ESPI is the referral acknowledgement. This is the number of people who were informed of the status of their specialist referral within ten days. The goal is 100 per cent. Another ESPI is access to assessment, which is the wait time for first specialist assessment. The goal is six months. The other six ESPIs are patients above the access threshold not offered treatment, patients waiting without a plan of care, patients waiting more than six months for treatment, patients waiting more than six months for review, percentage of target surgical volumes met, and use of national priority tools.

Detailed descriptions of the referral guidelines, assessment criteria, management guidelines, and ESPIs, as well as the ESPI data for recent months can be found on the New Zealand's Ministry of Health Elective Services Website, <http://www.electiveservices.govt.nz/>.

Hong Kong

In 1995 the Hong Kong Department of Health launched a performance pledge, which consisted of target wait times for a number of different health care services.

These include: child assessment, clinical genetics, elderly health services, family health services, forensic pathology, general outpatient, pharmaceutical service, port health office, radiation health unit, school dental care, social hygiene, special preventive program for AIDS and hepatitis B, student health service, travellers' health service, tuberculosis and chest, and civil servants families' clinic and dental service.

The targets are mainly for waiting room times and referrals waits, but also include times for some administrative tasks such as endorsing applications for import/export licences of pharmaceutical products. The achievement figures, reported as percentages of patients who have received the services within the target times, are posted on the department's website and are updated quarterly, <http://www.info.gov.hk/dh/performa/index.htm>.

Australia

In 1995 the National Demonstration Hospital Program was established to address elective surgery wait times. This program used lead hospitals with elective surgery wait-time management strategies in place as models for other, collaborating hospitals requiring improvements in their wait times.

The program was expected to

- transfer best practice models in the management of elective surgery in public hospitals throughout Australia
- develop and apply relevant industry benchmarks
- reduce clinically inappropriate waiting times
- disseminate program outcomes within the public hospital sector

Ireland

The document *Quality and Fairness: A Health System For You*, released in 2001 by the Irish government, is a summary of the plans to improve the health care system, which includes strategies for improving access to health services. The objectives listed for improving access were to

- resolve the present under-supply of beds through a major investment program in hospital capacity
- strengthen strategic management of acute hospital services
- reform the management of waiting lists
- improve integration of hospital and non-hospital services
- enhance patient referral and discharge functions
- improve accident and emergency services

- increase availability of diagnostic facilities
- ensure a fair balance between the mix of public and private patients
- seek to conclude contractual agreements that maximize the incentives for greater equity

The document also outlines how the management and organization of waiting lists will be reformed.

- Guidelines will be developed for referral and prioritization of patients within and between specialties, particularly where there are lengthy waiting times.
- Wait lists will be categorized by waiting times, broken down to the sub-specialty/procedure level.
- In every case where a patient is placed on a waiting list, a standardized placement record will be completed, which will enable waiting lists to be classified and more easily monitored.
- To aid decisions by general practitioners regarding referrals, waiting lists will be categorized by consultant and published on a dedicated intranet site. General practitioners will be able to access the data on the waiting lists of consultants
- General practitioners will be enabled to notify significant changes in the medical status of patients and to propose that the priority of the patient for treatment be reviewed.
- Waiting lists will be managed at the specialty level rather than at the individual consultant level to aid referral of patients to consultants with shorter lists.
- Waiting times will continue to be audited regularly to assure uniformly high standards of validity. Health boards and hospitals will be required to use validation procedures that ensure accurate and up-to-date information on their caseload.

Additionally, the government has created the National Treatment Purchase Fund. This fund has been established to purchase procedures for public patients at private hospitals in Ireland and from international providers, mainly in the UK. This alternative is offered to those patients who have been waiting longer than the target wait times.

United Kingdom

The Department of Health has implemented the following strategies to help manage wait times.

Referral Advice and Priority Tools

England's National Institute for Clinical Excellence released a document entitled *Referral Advice: a Guide to Appropriate Referral from General to Specialist Services* in 2001. It contains guidelines for the treatment of 11 common symptoms and diagnoses, advice for when to refer to a specialist, what a specialist would accomplish, and a priority system for the determination of the urgency of a particular referral.

Wait List and Wait Times Website

The Department of Health website (http://www.doh.gov.uk/waitingtimes) posts recent wait times and wait lists for over 60 medical and surgical specialties. Data is reported for time to first outpatient appointment, time to elective admission, and the numbers of deferred/suspended admissions. It is possible to view data for individual "trusts" (facilities) and by strategic health authority.

Within Canada

British Columbia

The Ministry of Health Services maintains the Surgical Wait List Registry, which documents surgical volumes and wait times reported by hospitals. The wait times are measured from the booking date to the date of the surgery. This database covers 95 per cent of all surgeries booked by referring physicians.

The Provincial Advisory Panel on Cardiac Care, formed in 1989, uses the information from the cardiac surgical registry, along with other data, to develop recommendations for cardiac services in British Columbia. This panel has also developed priority criteria for patients requiring cardiac surgery. These are based upon the seriousness of the disease and the risks of delay in treatment.

The public is provided with an easily accessible Internet website (http://www.hlth.gov.bc.ca/waitlist) with general information on wait lists such as wait-list myths, provincial wait-list trends, how to access information about wait times, how wait list data are collected and produced, and procedure-by-procedure information with median wait-list data. The information includes surgery wait-list data from 33 hospitals, grouped by community, hospital, and physician, and covers 19 specialty surgical procedures (cardiac surgery, carotid endarterectomy, cataract surgery, corneal transplants, dental surgery, ENT surgery, eye surgery, gall bladder surgery, general surgery, gynecological surgery, hip and knee replacements, neurosurgery, organ transplants, orthopedic surgery, plastic surgery, urological surgery, and vascular surgery) as well as cancer services. This information is also available through a 1-800 number providing access to a regional wait list coordinator.

The wait-times website has attracted acclaim from health researchers, administrators, and professionals, as well as the general public. The website has reduced patient stress by allowing patients and their families to make informed decisions based on wait times.

Alberta

The Alberta Wait List Registry is available on the Alberta Health and Wellness website (http://www.health.gov.ab.ca/wait_list). The registry was developed in response to the report of the Premier's Advisory Council on Health, which recommends a Wait List Registry as a way to improve Albertans' access to health information. The provincial government has allocated $1 million to this project.

The registry shows the times patients may have to wait before receiving specific procedures (surgeries and diagnostic tests) from a specific physician or health care provider. They can then discuss treatment options with their physician and make more informed decisions about their health care.

Saskatchewan

The Saskatchewan Surgical Care Network (SSCN) is an advisory committee to Saskatchewan Health dedicated to creating a more reasonable and fair surgical system for all Saskatchewan people.

The network is responsible for the following:

- Managing surgical services. This includes overseeing the creation of a province-wide surgical registry to track all patients waiting for surgery, monitoring the capacity of hospitals to deliver specific surgical services, and advising Saskatchewan Health and the regions on human resource issues and needs.
- Standards development and performance monitoring. This includes working with health partners (including the Western Canada Wait List project) to develop province-wide tools that will help doctors to consistently assess their patients' priority and place them fairly on the waiting list.
- Communicating with the public and health providers on surgical access issues. This includes reporting data on the functioning of the surgical services system and publishing this information on a website (http://www.sasksurgery.ca/about-sscn.html) as well as in an annual report.

The website includes patient waits for the following surgical specialties: cardiovascular, dental, general surgery, neurosurgery, obstetrics and gynecology, ophthalmology, orthopedics, ENT, plastic surgery, and urology.

Manitoba

Cardiac Surgery Registry

Manitoba has a central registry for cardiac surgery. Regional support services out of Winnipeg monitor the status of acute care wait lists. The Manitoba Centre for Health Policy and Evaluation has gathered and analyzed wait-time information in collaboration with the Ministry of Health.

In February 2003, it was announced that Manitoba would offer funding (the Cardiac Critical Shortages Fund) to cardiac patients who have exceeded recommended waiting, in order to cover accommodation and travel costs when receiving surgery outside Manitoba.

Western Canada Waiting List Project

The Western Canada Waiting List (WCWL) Project , funded federally through Health Canada's Health Transition Fund, was designed to improve the fairness of the system so that Canadians' access to appropriate and effective medical services is prioritized on the basis of need and potential to benefit. It is important to note that the objective of this project is not the collection of wait-time information but the creation and analysis of priority tools in the hopes they will be used in the health care system to better manage waits for key services.

The project assembled a group of 19 partners: four medical associations, four ministries of health, four health research centres, and seven regional health authorities (RHAs). It has since collaborated with researchers in several countries and hopes to further develop the community of interest in the project.

The criteria incorporated into the physician priority tools included: relative urgency, degree of severity, ability to work, ability to care for self and/or dependents, and ability to live, as well as two visual analogue scales meant to serve as indicators of overall urgency. Not included were demographic characteristics such as age and gender. This prioritization tool (scoring system) was used for cataract surgery, children's mental health, general surgery, hip and knee replacements, and MRI scanning.

The WCWL lists a number of other accomplishments:

- A partnership of key health care system stakeholders has been formed.
- Interviews with key clinical and administrative staff in seven participating RHAs revealed general support for the criteria representing a transparent and consistent method for assigning priority to patients on waiting lists.
- Public opinion focus groups held in seven western Canadian cities revealed that the prioritization tools represent potential improvements to the health care system and that the mix of clinical and social/role criteria employed were relevant and appropriate.

The Ontario Waiting List (OWL) Project

Funded by a research grant approved by the Ontario Ministry of Health and Long-Term Care (MOHLTC), the Ontario Joint Policy and Planning Committee administered a project to develop and evaluate priority rating tools to standardize the process of prioritizing patients awaiting medical services. Basing the project on work by the WCWL Project that was under way, the OWL Project examined priority rating tools for three services: general surgery, cataract removal, and MRI scans. After making some slight modifications to the tools, they looked at the validity, reliability, clinical relevance, and practicality of application for each one. The analysis, which consisted mainly of clinical panel evaluations, physician and patient usage, and standardized paper cases, found the tools to show great promise. The general surgery and cataract removal tools showed the greatest reliability. However, recommendations were made to further develop and refine each of the tools.

Concurrently, the project utilized a survey to collect information about the current wait-list management strategies in use in operating room and diagnostic-imaging services across Ontario.

The Cardiac Care Network of Ontario (CCN)

The CCN is an advisory body to the MOHLTC. They coordinate the provision of advanced cardiac services for adults province-wide, with the aid of a computerized patient registry, and advise the MOHLTC on matters related to adult cardiac services, using both data and consensus-driven methods.

CCN's patient registry has included cardiac surgery since 1990 and was updated in 2000 to include cardiac catheterization, angioplasty, and stent procedures. It includes all 17 hospitals in the province that provide adult cardiac catheterization, angioplasty, or cardiac surgery.

The network's website provides both volumes and wait times, by urgency level, for both those waiting and those who received surgery during the past year. This information is provided for cardiac catheterization, angioplasty, and cardiac surgery.

The Ontario Joint Replacement Registry

This project, initiated in March 2000, and funded by the MOHLTC, arose out of the need for an information infrastructure on which to collect wait time and volume information for joint replacement surgery, as well as outcome information to improve the quality of procedures as well as reduce revision rates. It is implemented province-wide and captures information on hip and knee replacement surgery, including wait times for consultations and surgeries, patient demographics, surgical techniques and environments, and types of replacements used. Severity ratings and patient outcomes are assessed using the Western Ontario McMaster (WOMAC) Osteoarthritis Index. Future plans include the addition of prioritization tools.

The current goal is 95 per cent success in implants over 10 years with an average of four months' waiting time for surgery.

Nova Scotia

Capital Health's Divisions of Cardiology and Cardiac Surgery

This project tracks wait times and wait lists for cardiovascular surgeries and investigative procedures, including cardiac catheterizations, coronary angioplasties, and coronary artery bypass grafts.

The Division of Cardiology admits and prioritizes patients to the wait list from the referrals they receive, based on a system of four priority categories. The Division of Cardiac Surgery collects and manages the wait-time information using the Pathways Healthcare Scheduling (PHS) software, STAR registration software, and Cardiac Sciences databases. Weekly conferences are used to discuss the wait list, prioritize patients, and keep booking officers, cardiologists, and surgeons up to date.

Wait times are measured in days, presented by urgency classification. Wait lists consist of the number of cases, by urgency classification, waiting to be treated at the beginning of each month. Tables E.1 and E.2 summarize some recent data.

Table E.1: Cardiovascular Procedure Wait Times in Capital Health for Selected Months in 2003

Procedure	Priority	Average Wait Times (Days)				
		April	May	June	July	August
Cardiovascular surgery	Urgent in-hospital	3	3	3	2	3
	Semi-urgent A	52	45	56	20	24
	Semi-urgent B	49	70	71	48	62
	Elective	88	90	97	117	113
Catheterization	Urgent	19	19	21	21	23
	Semi-urgent	60	60	53	50	53
	Elective	90	89	88	77	81
Angioplasty	Urgent	21	22	25	29	27
	Semi-urgent	32	31	37	38	35
	Elective	43	21	80	41	95

Source: Performance Measurement and Health Informatics Section, Information Management Branch, Nova Scotia Department of Health

Table E.2: Patients on Cardiovascular Procedure Wait Lists in Capital Health for Selected Months in 2003

Procedure	Priority	Average Wait Times (Days)				
		April	May	June	July	August
Cardiovascular surgery	Urgent in-hospital	0	0	0	0	0
	Semi-urgent A	33	23	30	30	28
	Semi-urgent B	78	59	60	62	64
	Elective	31	40	39	31	34
Catheterization	Urgent	38	45	35	42	24
	Semi-urgent	171	156	132	142	103
	Elective	185	194	158	168	151
Angioplasty	Urgent	7	2	9	23	7
	Semi-urgent	14	19	12	25	18
	Elective	13	14	16	6	19

Source: Performance Measurement and Health Informatics Section, Information Management Branch, Nova Scotia Department of Health

Capital Health's Wait List Management Project for Orthopedic Services

The objectives of this project are to centralize the list of patients waiting for services, list patients by priority rating, report wait times and patient volumes (specific to patient, surgeon, and procedure), and report wait-list information.

This project uses a database to house wait-list information for all patients waiting for a particular orthopedic procedure, namely, hip replacements, knee replacements, arthroscopies, and more recently, back surgery. The database captures priority ratings of patients: however, it does not yet define the order of patients waiting for surgery.

Cancer Care Nova Scotia

Wait times for all cancer patients in Nova Scotia are currently captured using the Oncology Patient Information System (OPIS), which is managed through a partnership among Cancer Care Nova Scotia (CCNS), the Nova Scotia Cancer Center (NSCC) in Capital Health, and the Cape Breton Cancer Center (CBCC) in the Cape Breton District Health Authority. The software is used primarily for patient registration, referral processing, and physician and treatment scheduling. As a result, OPIS is capable of generating wait-time reports for medical oncology, palliative care, psychiatric oncology, radiotherapy, surgical oncology, and support services.

The use of priority bands and tools is important to the booking of patients, but are not captured in OPIS and so wait times cannot be reported by priority. The exception to this is radiotherapy treatment. Table E.3 summarizes some of the radiotherapy treatment wait-time data for selected months in 2003.

Table E.3: Wait Times for Radiotherapy Treatment in Nova Scotia for Selected Months in 2003

Facility	Priority	Average Wait Times (Days)			
		April	May	June	July
NSCC	Emergent	0	1	1	0
	Urgent	14	11	9	9
	Intermediate	26	27	22	18
	Standard	55	39	33	28
	Other*	60	66	45	41
CBCC	Emergent	0	1	1	n/a
	Urgent	5	5	6	9
	Intermediate	n/a	17	n/a	14
	Standard	33	43	39	43
	Other*	61	73	65	119

Source: Cancer Care Nova Scotia

Note: cells with n/a indicate that there were no patients for that priority level waiting for radiotherapy treatment that month.

* "Other" refers to patients whose treatments are scheduled according to specific protocols (e.g., part of a clinical trial, to coincide with a chemotherapy treatment schedule), and are not necessarily booked according to the next available time.

Appendix F: Project Secretariat

All members of the secretariat are employees of the Performance Measurement and Health Informatics Section, Information Management Branch, Nova Scotia Department of Health.

- **Brenda Ryan**, Director (Provincial Wait Times Monitoring Project Coordinator)
- **Barb Harvie**, Manager, Clinical Information
- **Jordan Hunt**, Research and Statistical Officer
- **Brie Morey**, Research and Statistical Officer
- **Mary Anne Finlayson**, Research and Statistical Officer
- **Chris Caudle**, Research and Statistical Officer

Appendix G: Guide to Acronyms and Abbreviations

ACA	Access Criteria (for First Specialist) Assessment
CBCC	Cape Breton Cancer Centre
CBHCC	Cape Breton Health Care Complex
CCN	Cardiac Care Network (Ontario)
CIHI	Canadian Institute for Health Information
CPAC	Clinical Priority Assessment Criteria
CT	computed tomography
DAD	Discharge Abstract Database
DIM	diagnostic imaging manager
ESPI	Elective Service Provider Indicator
FTE	full-time equivalent
ITS	Imaging and Therapeutic Services (software module)
MAC	medical advisory committee
MMGS	Maritime Medical Genetics Service
MOHLTC	Ministry of Health and Long-Term Care (Ontario)
MRI	magnetic resonance imaging
NSCC	Nova Scotia Cancer Centre
NSDOH	Nova Scotia Department of Health
NShIS	Nova Scotia Hospital Information System
OECD	Organisation for Economic Co-operation and Development
OPIS	Oncology Patient Information System
OWL	Ontario Waiting List (Project)
PHS	Pathways Healthcare Scheduling (software)
RHA	regional health authority
SMS	Shire Management System (software)
SSCN	Saskatchewan Surgical Care Network
VAS	visual analogue scale
WCWL	Western Canada Waiting List (Project)
WOMAC	Western Ontario and McMaster Universities (Osteoarthritis Index)

Appendix H: Potential Use of Wait-Time Information

The mandate of each of the working groups was to discuss the potential use of wait-time information in reducing wait times. The following is a short summary of the common themes that arose from these discussions. It is not meant to be an exhaustive list of all the possible potential uses.

Review of Wait Times and Redirection of Referrals

There are two ways in which the data alone can be used to manage wait times: review of the information by involved parties and redirection of referrals.

Regular wait-time reports should be made available to all those involved in the management of the movement of patients through a particular health care service. These parties would then have the opportunity to review the information and discuss potential strategies to manage wait times. For example, in the management of CT and MRI wait times, reports could be made available to diagnostic imaging managers (DIMs), heads of radiology, and medical advisory committees (MACs). In this case, the existing committee structures for MACs and DIMs could provide a suitable forum for discussion.

By making wait-time information available to patients and the physicians who refer them, patients can be directed to the service locations with shorter waits, thereby evenly distributing the demand for that service.

Exception: Genetic Services

The fact that the MMGS is already the central service for all Maritime provinces excludes the potential for redirection of referrals. However, the reporting of the wait times will still be useful in raising awareness of the need to implement other effective wait-time management strategies.

Appendix I: Factors Influencing Wait Times

Part of the mandate of each of the working groups was to discuss some of the factors that influence wait times and are thus important considerations for the management of wait times. The following discussion is a summary of the major issues that arose from these discussions. It is not meant to be an exhaustive list of all the possible influencing factors in each priority area, although some specific examples are occasionally used. Also included are some of the influencing factors that have been reported in the literature.

Wait Time Factors—Supply and Demand

The wait time for any health care service is influenced by the balance between the supply and demand for that service. On the supply side are the elements necessary for the delivery of the service such as facilities and equipment, human resources, and the organization of these to operate a service productively. On the demand side are the factors influencing the requirement for the service. These are primarily disease prevalence, the referring patterns of physicians, physician thresholds for performing procedures, patient preference, and the number of emergency patients. Another factor affecting the demand is the wait time itself. Each of these elements is discussed in the paragraphs below.

Facilities, Equipment, and New Technologies

With more facilities and equipment more tests and procedures can be performed; however, from the literature it can be seen that there have been unsuccessful attempts at reducing wait times when the only strategy has been to add resources. Without also incorporating organizational changes and changes to practice, the actual effect on wait times can be minimal or none.[21]

For some services, a large number of facilities and a large amount of equipment can be required. For example, a surgical service requires operating rooms, operating instruments and equipment, anesthetic equipment, and post-operative recovery facilities. For other services the requirements are narrower such as the machines used to perform MRI scans.

Facilities and equipment may have little influence over the wait times for general practitioner to specialist referrals, but must still be given consideration within the bigger picture of waiting. If, after the initial appointment with the specialist, a patient requires a diagnostic test before further treatment can be provided, and there is a significant wait time for that test, then adding more physicians, and in turn capacity for consultations, will not solve the problem. This will simply shift the bottleneck from a wait to see a specialist to a wait for a diagnostic test.

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21. Shortt S.E.D. *Waiting for Medical Services in Ontario: Clarifying the Issues in a Period of Health Reform. A Discussion Paper for the Atkinson Charitable Foundation.* February 2000. p. 13.

New technology can have different effects on wait times. The introduction of new equipment that can perform tests or procedures at a faster rate has the potential to shorten wait times, but can also stimulate a greater demand for the service and offset wait time reductions.[22] As well, the introduction of newer and simpler treatments that reduce the need for more complex procedures can free up facilities for other patients thus reducing wait times by decreasing the demand.

The technology now exists for the use of mobile MRI or CT scanning units. This is an option that can be considered for use in remote areas, but due to the small size of the province this may not be the best investment for Nova Scotia.

Human Resources

An abundance of facilities and equipment is of no benefit without the human resources to operate and manage them, and even a single health care service can require numerous support, administrative, and health care staff. Thus, consideration must also be given to the interdependence among health care professionals. For example, surgical procedures require surgeons but also anesthetists, booking clerks, operating room nurses, custodial staff, post-operative nurses, and rehabilitative therapists, to name a few.

The following are some of the factors that should be considered for health human resource planning:

- training programs—duration, location, and cost
- certification/licensing requirements
- competitiveness of salary and benefits
- availability of facilities and equipment
- job satisfaction—workload, call schedules, professional development, ability to pursue personal clinical or research interests
- compatibility of location with lifestyle priorities—churches, shopping, schools, rural vs. urban, spousal employment opportunities, etc.
- current and anticipated need
- demand for procedures that is sufficient to maintain required skills
- rates of retirement

Detailed discussions of the specific human resource planning issues for 31 health-related professions in Nova Scotia can be found in *Nova Scotia Health Human Resources Study: Occupational Summaries, Profiles, and Issues.*[23]

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22. Same as footnote above, p. 5.

23. Nova Scotia. Health Care Human Resources Sector Council. *Nova Scotia Health Human Resources Study: Occupational Summaries, Profiles, and Issues* (Dartmouth: Health Care Human Resources Sector Council, 2003).

As an example, one of the human resources required for CT and MRI scanning is Medical Radiation Technologists (MRTs). MRTs are responsible for the operation of the radiological equipment as well as the safety of patients and staff during the scanning procedure. Some of the current factors for consideration in human resource planning for MRTs include the following:

- the anticipated change in the criterion for certification from a diploma to a degree by 2005 by the Canadian Association of Medical Radiation Technologists
- the closest facility for training in radiation therapy and magnetic resonance imaging is the Michener Institute in Toronto
- maternity leaves among the primarily young, female population that comprises MRTs

The supply of MRTs has remained greatly unchanged over the past decade; however, in more recent years (1997–2000) Nova Scotia has seen a decline of four per cent in the number of MRTs, while Canada has experienced a growth of almost three per cent. In 2002, Nova Scotia did have more MRTs per capita than the national average, with 5.34 MRTs per 10,000 Nova Scotians compared to 4.70 MRTs per 10,000 Canadians.[24]

Organization

Two service locations with similar resources can have different wait times if the levels of productivity differ. It is important that efforts be made to ensure that all locations are operating in an efficient manner. All parties involved in the movement of patients through a particular service, including physicians, other health care professionals, and administration, should take the opportunity to review wait time information and discuss options for increasing productivity (within existing resources). Sharing of organizational best practices among service locations would also be beneficial.

Organizational changes could also be considered for booking methods. Some examples of booking practices that have been reported in the literature include the following:[25]

- **Patient Prioritization**—prioritizing patients according to need using objective clinical criteria. This has been an important part of the current wait-time monitoring project.
- **List Centralization**—using one wait list for patients of all physicians of a particular specialty
- **Wait List Auditing**—checking the wait list for patients who may have died, moved away, received the service elsewhere, no longer require the service, or refuse the service when offered.
- **Wait List Manipulation**—replacing wait lists with pre-arranged dates for admission.

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24. Same as footnote above, p.125.

25. Shortt S.E.D. *Waiting for Medical Services in Ontario: Clarifying the Issues in a Period of Health Reform. A Discussion Paper for the Atkinson Charitable Foundation.* February 2000. pp. 11–12.

Disease Prevalence

The higher the prevalence of a particular disease condition the greater the demand will be for the services required to diagnose or treat that condition. Disease prevalence is probably the most difficult factor to control because it involves addressing the health of an entire population. In addition, there can be a very long lag time between the implementation of population health strategies and seeing evidence of results.

Aging populations also have an effect on the demand for health care services. Since people are living longer, the size of older age groups is increasing, and so the demand for tests and procedures associated primarily with age-related disorders will grow too. The contribution of baby boomers to the aging population will have an especially great impact on this demand. Currently in Nova Scotia, the over 65 age group comprises about 14 per cent of the population. It is estimated that by 2026 this will likely grow to about 25 per cent.[26]

The prevalence of many diseases is on the rise and this must also be considered when planning for wait time management. It has been predicted that, by the year 2026, there will be 6.4 million Canadians with arthritis, an increase of 54 per cent from 2000/01 estimates.[27] This could have a great impact on the demand for joint replacement surgery, especially since Nova Scotia already has the highest prevalence of arthritis in the country.[28] The demand for medical oncology services will be affected by cancer rates. Within Canada, Nova Scotia already has the second highest estimated incidence of cancer in males and the highest in females.[29]

Referral Practices of Physicians

It is important to ensure that referrals that are not necessary do not add volume to wait lists and needlessly lengthen wait times for other cases. One way to ensure this is minimized is through continuing medical education courses. Depending on physician interest and the availability of presenters, Dalhousie University's Department of Continuing Medical Education (CME) can provide courses in any area. For example, a 40-minute presentation entitled, "CT: Applications for the General Practitioner and Beyond," was part of the Annual Dalhousie Refresher Course for family physicians held in late November 2003. It is likely that another related presentation would be planned for the next refresher.

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26. Canada. Statistics Canada. Catalog 91-520.

27. Canada. Health Canada. *Arthritis in Canada, An Ongoing Challenge* (Ottawa: Health Canada, 2003), p. 10.

28. Same as footnote above.

29. Canada. National Cancer Institute of Canada. *Cancer Statistics 2003* (Toronto: National Cancer Institute of Canada, 2003), p. 25.

Dalhousie's Department of CME also provides educational programs to physicians throughout the province using the Nova Scotia Telehealth Network. The Network is a province-wide system of telecommunications links and video conferencing equipment connecting 42 health care facilities throughout the province. With this system, much of the CME's program is delivered to physicians in their home health care facilities.

It is reported that in areas where there is greater interaction between specialists and general practitioners on a regular basis, there is a lower rate of specialist referrals. It is possible that increasing general practitioner access to specialist knowledge across the province, through programs such as the Nova Scotia Telehealth Network, would help reduce unnecessary referrals.

Some countries have created specific referral guidelines for general practitioners to use when considering referral to a specialist. Some of the guidelines include the following:

- suggestions for management wi... primary care
- guidelines for the information that should be included in a referral letter and explanations of how the information is used to prioritize patients
- indications of what can be accomplished with the specialist consultation

Physician Threshold for Performing Procedures

The threshold for performing a procedure is determination by a surgeon that surgery is required. Surgeons with lower thresholds will book more procedures and, as a result, may have longer wait times.[30] The use of specific standard clinical criteria in surgical decision-making can be used to ensure all surgeons are offering procedures to patients at the same rate. This ensures surgery rates are determined more by disease prevalence and less by the opinions of individual surgeons. Research into the outcomes following surgical procedures can shed more light on the benefits that can be attained and how clinical criteria should be established.

Patient Preference

Either by personal experience or based on reputation, patients often develop preferences for certain physicians. Physicians for whom there is a greater demand are likely to have longer wait times and their patients are more likely to endure these longer waits to ensure they see their physician of choice.

Patient-related factors can often lead to the cancellation and rescheduling of appointments. If delays in service delivery of this nature are not accounted for in the data collection (i.e., removed) then there is the possibility that the reported wait times would be lengthened by factors beyond the control of the particular service.

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30. France. Directorate for Employment, Labour, and Social Affairs. Organisation for Economic Co-Operation and Development. *An International Comparison of Policies to Tackle Excessive Waiting Times for Elective Surgery: Interim Report of the OECD Waiting Times Project* (Paris: Organisation for Economic Co-Operation and Development, 2003), p. 17.

Emergency Cases

Emergency cases have priority when waiting for tests or treatment. A greater number of emergency cases, or a decrease in the threshold of what is considered an emergency case, can push back elective cases and increase their wait times.

Wait Times

The wait time itself can have a stabilizing influence on the demand by way of a negative feedback control. Long wait times can act as a deterrent in seeking a particular service and thereby prevent the wait time from lengthening. As well, shortening of wait times can encourage more referrals and thus offset any gains.

The fact that resources may be allocated to services with long wait times creates a potential incentive for the maintenance of long lists. Care must be taken to ensure this is not encouraged.

Appendix J: Review of Priority Tools for Surgery

Western Canada Wait List (WCWL) Project

The WCWL has created several prioritization tools to capture degree of urgency among patients. In the surgical services area, three specialty specific tools have been developed: the hip and knee replacement tool, the cataract surgery tool, and the general surgery tool.

Common to all tools is a set of point-count criteria including questions on patient co-morbidities; assessment of pain, suffering, and disability; and probability of improvement with treatment. Specific criteria change, depending on the tool in use. Each tool also has a 10-cm visual analogue scale (VAS) for assessment of urgency of the case. Both the point-count of the criteria and the VAS are used to define the patient's priority for surgery.

The WCWL tools have undergone a series of validation exercises and continue to be validated as more data becomes available.

New Zealand

Clinical Priority Assessment Criteria (CPAC) tools are available for all orthopedic procedures. Different guidelines and scoring tools apply to different procedures.

The scoring system for the Major Joint Replacement Tool includes an assessment of pain, functional activity, movement, and deformity, and "other factors" which include multiple joint involvement assessment and impact on independent living assessment. Each indicator is given a score. The sum of all indicator scores can total to a maximum of 100, where 100 indicates the highest priority and 0 is the lowest priority.

The tools have an associated "Orthopedic Priority Ranking Index," which establishes priority ranges for each procedure. For instance, an elbow arthroscopy has a priority range of 20–60, whereas a hip revision has a priority range of 60–95. The scores from the CPAC tool are "fit" into these ranges to determine relative priority.

Appendix K: Review of Priority Tools for CT and MRI

Western Canada Wait List (WCWL) Project

As part of improving the way in which wait lists are structured and managed, the WCWL created a tool to allow referring physicians to assign a priority to patients referred for an MRI. It asks referring physicians to choose a score in each of the following five areas:

- usual duration/frequency/intensity of pain and/or suffering
- severity of illness/impairment
- probable course of clinical deterioration
- probability of MRI providing clinically significant diagnostic information
- probability of successful treatment resulting from the diagnostic information

For each, there are three choices: none/mild/low, medium/moderate, high/severe. Each choice is associated with a numerical score of 5, 10, and 20 respectively. The total (referred to as a priority criteria score), with a maximum of 100, gives the relative priority of a particular patient. In addition, the physician is required to place a mark on a 10-cm line, or visual analogue scale (VAS), to represent their overall impression of the urgency of the patient. The far left of the scale is marked as "Not Urgent at all (probably doesn't require MRI)" and the far right is labelled "Extremely Urgent (just short of an emergency)." Lastly, the physician is asked for his or her opinion as to the maximum wait time for the patient.

Ontario Waiting List (OWL) Project

The MRI priority tool used in the OWL project is based on that from the WCWL project. However, they decided to simplify the tool, as it was believed that the lengthy process involved in the completion of the form might reduce the uptake by physicians.

The tool consists of two parts. The first part is the MRI priority rating index. It asks referring physicians to indicate with a check mark the level of severity that best describes the patient's current situation. The tool does not include any criteria for the determination of low, medium, or high severity levels, nor is there a score calculated to convert the results into priority bands. Figure K.1 illustrates the index.

Figure K.1: The OWL Project's MRI Priority Rating Index

Category	Low	Med	High
M (Morbidity): Risk of permanent morbidity with increased exam delay			
R (Results): Degree to which exam results will affect patient management			
I (Incapacity): Degree of patient's pain and/or suffering while waiting for MRI			

The second part of the tool is the Global Priority Rating. Similar to the VAS in the WCWL tool, it consists of a horizontal line marked with numbers from 1 to 10, on which the physician makes a mark to represent an overall impression of the urgency of the case. The Global Priority Rating is shown in Figure K.2.

Figure K.2. The OWL Project's Global Priority Rating

Appendix L: New Zealand's Gastroenterology Priority Tool

The New Zealand Ministry of Health has developed standards for what should be included in referrals to gastroenterology, as well as a tool for prioritizing these referrals. The referrals should include the following:

- relevant past history including details of any previous treatments (e.g., gastrointestinal tract surgery, malignancy, endoscopy), and investigations (X-rays, barium studies, endoscopy, etc.)
- salient presenting symptoms and their duration as well as significant negatives
- details of any recent trials of treatment
- patient details of any concurrent medical condition(s) that may potentially influence the referred condition or its treatment (e.g., diabetes)
- details of any previous adverse response to anesthetics (relevant to gastroenterology)

The prioritization guidelines that have been developed are for 12 typical gastroenterological problems. For each problem the guidelines suggest whether a patient should be admitted to hospital or booked for a consultation with a specialist. They also provide a priority and recommended timeline for the suggested action, shown in table L.1. For some conditions, alternative priority ratings are offered. The guidelines also recommend whether the patient should be booked for an endoscopy in addition to, or instead of, being admitted to hospital or booked for a consultation. The complete guidelines are listed in Table L.2.

Table L.1: New Zealand's Priority Bands and Recommended Maximum Wait Times for Gastroenterology

Action	Priority	Recommended Maximum Wait
Admission	A	Within 24 hours
	B	Within 3 days
Outpatient Assessment	A	Within 1 week
	A/B	1 to 3 weeks
	B	3 to 10 weeks
	C	Within 24 weeks
Endoscopy		Primary endoscopy preferred option

Table L.2: New Zealand's Prioritization Tool for Gastroenterology

Indication	Description	Preferred Priority	Alternative Priority
Upper GI hemorrhage		Admission A Endoscopy	
Dysphagia/ foreign body		Endoscopy	Admission A
Iron-deficient anemia (no GI symptoms)		Endoscopy	
Dyspepsia/ heartburn	Not recently investigated	Endoscopy	
	Long standing/recent gastroscopy	Assessment C	
Nausea/anorexia/ weight loss		Assessment A/B Endoscopy	Admission B Assessment B
Abdominal pain	Suspected acute abdomen	Admission A	
	Short history/ "alarm" symptoms	Assessment A/B	Assessment A
	Long standing/no "alarm" symptoms +/- irregular bowel motions	Assessment C	Assessment B
Diarrhea	Acute/dehydration	Admission A Admission B	
	Recent onset/with "alarm" symptoms	Assessment A/B	Assessment A
	Long standing/ no "alarm" symptoms	Assessment C	Assessment B
Constipation	Recent onset/with "alarm" symptoms	Assessment B	Assessment A/B
	Long standing/ no "alarm" symptoms		Assessment B Endoscopy
Rectal bleeding	Acute lower GI hemorrhage	Admission A	Endoscopy
	Recent onset/ "alarm" symptoms +/- change in bowel habit	Assessment A/B	Endoscopy
	Long standing/no "alarm" symptoms	Assessment B	Endoscopy
Family history of bowel cancer		Assesment C	Endoscopy
Jaundice	Recent onset/ "hepatitis" type/with "alarm" symptoms	Admission B	Admission A
	Recent onset/ "hepatitis" type/no "alarm" symptoms	Assessment A/B	
	Recent onset/ "obstructive" type/ with "alarm" symptoms	Assessment A	Endoscopy
Abnormal liver function tests	Recent onset/ with "alarm" symptoms	Assessment A	Endoscopy
	Long standing or incidental finding/ no "alarm" symptoms	Assessment C	

Appendix M: Priority Tool for Medical Oncology in Capital Health

Criteria	Priority	Target Wait Time
GENERAL		
• superior vena caval obstruction due to small cell lung cancer	emergency/urgent	24 hrs
• presence of small cell (oat cell) carcinoma of lung • germ cell tumour: metastatic • inflammatory breast (peau d'orange)	emergency/urgent	1 week
BREAST		
• mastectomy: < 1 cm tumour, node negative	may not require referral	
• breast conserved: ≥1 cm tumour, node negative • breast conserved: node positive • mastectomy: ≥1 cm, node negative • mastectomy: node positive	normal	6 weeks
• locally advanced breast cancer: for pre-operative chemotherapy	normal	2 weeks
• urgent recurrent/ metastatic breast cancer • inflammatory breast carcinoma	normal	1 week
ENT		
• naso-pharynx	normal	2 weeks
GI		
• gastric (adjuvant and metastatic) • adjuvant colon (stages II and III) • metastatic colorectal cancer • carcinoid (metastatic, asymptomatic)	normal	6 weeks
• pancreas (surgically resected, i.e., for adjuvant therapy) • carcinoid (surgically resected)	normal	4 weeks
• carcinoid (metastatic, symptomatic)	normal	3 weeks
• rectal (pre-operative) • locally advanced/metastatic/unresectable disease • anal	normal	2 weeks
GU (Urology)		
• bladder (non-symptomatic metastatic) • kidney (non-symptomatic metastatic) • penis (non-symptomatic metastatic)	normal	2 weeks
• prostate (non-symptomatic metastatic)	normal	1-2 weeks
• prostate (symptomatic metastatic, bleeding/pain) • testes • bladder (symptomatic metastatic) • kidney (symptomatic metastatic) • penis (symptomatic metastatic)	normal	1 week

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Criteria	Priority	Target Wait Time
Gynecology		
• All gynecological referrals are urgent and are sent directly to a surgeon or radiation for booking		
Hematology		
• all hematology referrals	normal	2 weeks
Neurological		
• pituitary • acoustic neuroma • low grade glioma (may also be called astrocytoma/ oligodendroglioma/ependymoma/mixed glial tumours) • hemangioblastoma	normal	4 weeks
• all other neurological referrals	normal	2 weeks
Sarcoma		
• osteogenic sarcoma (metastatic), metastatic soft tissues (not otherwise specified)	normal	4-6 weeks
• gastrointestinal stromal tumours (GIST)	normal	3 weeks
• Ewing's sarcoma (metastatic)	normal	2 weeks
• osteogenic sarcoma (pre-operative) • Ewing's sarcoma (pre-operative or curative)	normal	1 week
Skin		
• all skin referrals	normal	4 weeks
Thoracic		
• non small-cell lung	normal	2 weeks
• small-cell lung • esophagus	normal	1 week
Unknown		
• liver metastases • lymph node involvement	normal	2 weeks

Appendix N: New Zealand's Medical Oncology Priority Tool

The New Zealand Ministry of Health has developed standards for what should be included in referrals to medical oncology as well as a tool for prioritizing these referrals.

Through the use of these criteria cases are assigned to a priority category with associated target wait times (see Table N.1). The criteria are based around risk of mortality or morbidity, benefit from treatment, and severity and progression of symptoms. The tool and criteria, as well as the recommended maximum wait times used for oncology referrals, can be found in the Table N.2. Immediate and urgent cases must be discussed with the specialist or registrar in order to get appropriate prioritization and then a referral letter is sent with the patient, faxed, or e-mailed.

Table N.1: New Zealand's Category Definitions for Referral Guidelines (Priority Bands and Recommended Maximum Wait Times) for Oncology

Category	Recommended Maximum Wait
Immediate	within 48 hours
Urgent	within 1 week
Semi-Urgent	within 4 weeks

Table N.2: New Zealand's National Access Criteria for First Assessment by Oncology

Category	Criteria	Examples (not an exhaustive list)
Immediate	• condition: urgent condition that needs treatment (risk to life or of permanent functional impairment if not treated within 48 hours) • pre-surgical assessment/opinion	• spinal cord compression • superior vena caval obstruction • cauda equina compression • major life-threatening hemorrhage not amenable to surgical intervention • rapidly progressive neurological symptoms from primary or metastatic CNS tumours • major upper airway or bronchial obstruction • esophageal obstruction • hypercalcaemia
Urgent	• risk to life or of permanent functional impairment or severe symptoms • severe rapidly progressing symptoms outside of immediate category	• advanced testicular tumour • advanced high grade lymphoma
Semi-urgent	• adjuvant therapy to improve outcome • curative therapies of less rapidly progressive cancers • non-curative treatment with less severe symptoms • non-life-threatening malignancy	• adjuvant treatment • palliative chemotherapy/radiotherapy • sympotomatic prostate cancer • "incidental finding" prostate cancer • skin cancer (non melanoma)

Appendix O: New Zealand's Plastic Surgery Priority Tool

Referrals to plastic surgery are assigned to a priority category, each with an associated recommended maximum wait time. The criteria, priority categories, and recommended wait times are shown in Table O.1. The priority categories for specific diagnoses are shown in Table O.2.

The submitted referral should include a provisional diagnosis and associated priority category. It is noted that the details and diagnosis are important to support the prioritization. Referring physicians are also warned that the specialist reserves the right to override their prioritization and that referrals not containing sufficient information may be returned for amendment.

Table O.1: New Zealand Prioritization Category Definitions for Plastic Surgery

Category	Recommended Maximum Wait	Notes/Criteria
Immediate (1)	3 days	Referral must be accompanied by a phone call
Urgent (2)	3 weeks	Condition likely to deteriorate or cause impairment if left for an extended period without treatment
Semi-Urgent (3)	6 weeks	Condition requiring plastic surgical assessment as soon as possible but condition will not deteriorate if not seen at a short notice
Routine (4)	16 weeks	Patient at no physical or systemic risk if not assessed in designated time

Table O.2: New Zealand's Priority Categories for Specific Diagnoses

Diagnosis Category	Diagnosis	Priority Category	Referral Guidelines
Lesions	melanoma - or suspected	1	*incision* biopsy not recommended
	other skin cancers (not malignant melanoma) or suspected	2	
	other malignancies (head/neck/oral/salivary/ connective tissue)	1	
	benign skin lesions and subcutaneous lumps	3	
	benign tumours other than skin and subcutaneous	3	
General	reconstruction after tissue loss	1 to 3	
	scar revision and scar management	3	
	burns and burn scar management	1 to 3	
	vascular malformations	2 to 3	priority category 1 if encroachment on visual field
	pressure sores	1 to 3	
	other chronic sores and ulcers	2 to 3	
	hydradenitis suppurativa	2 to 3	
	axillary hyperhidrosis	3	
	foreign body removal	2 to 3	
	lymphoedema	3	
	chest wall deformities (e.g. pectus excavatum)	3	
	liposuction in "abnormal" cases	3	
	abdominal redundancy	3	(local service to indicate availability)
Face	cleft lip and palate	1	refer antenatally if detected or else at birth
	other craniofacial abnormalities	2	
	maxillo facial abnormalities, especially cleft lip and palate	3	
	facial palsy	3	priority category 1 if risk of corneal exposure
	tongue reduction	3	Down's syndrome
Nose	tongue tie	3	refer if affecting speech
	nasal deformity	3	
	nasal reconstruction	3	
	rhinophyma	3	
Eyelids	ptosis (levator weakness)	3	
	ectropion	3	
	eyelid reduction in "abnormal" cases	3	

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Diagnosis Category	Diagnosis	Priority Category	Referral Guidelines
Ears	ear reconstruction (congenital and traumatic abnormalities)	3	indicate whether hearing status has been checked
	prominent ears	3	(local service to indicate availability)
Breast	breast reconstruction (usually after mastectomy)	3	(local service to indicate availability)
	breast reduction	3	
	gynaecomastia	3	
	mastopexy	3	
	congenital abnormalities of the breast	3	
Hand	congenital hand deformities	3	priority category 1 if neonate or antenatal
	secondary hand surgery after injury	2 to 3	
	stenosing tenosynovitis (e.g. de Quervains)	2	
	carpal tunnel and other nerve compression syndromes	2	
	nerve palsies	2 to 3	
	rheumatoid hand deformities	2 to 3	
	Dupuytrens contracture	3	
	ganglion and soft tissue tumours of the hand	3	
Genital	hypospadias/epispadias	3	priority category 1 if neonate. Has renal tract been imaged?
	vaginal/vulval/penile reconstruction	3	

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